S
628.16
832
H2sbcB
Part Three

DRAFT

SILVER BOW CREEK

REMEDIAL INVESTIGATION FINAL REPORT
APPENDIX B, PART 3
Attachment V
Physical Data

STATE DOCUMENTS COLLECTION

JAN 26 1988

MONTANA STATE LIBRARY
1515 E. 6th AVE.
HELENA, MONTANA 59620

GROUND WATER AND TAILINGS INVESTIGATION

PLEASE RETURN

SUBMITTED TO:

Montana Department of Health and Environmental Sciences
Helena, Montana

MONTANA STATE LIBRARY
1515 E. 6th AVE.
HELENA, MONTANA 59620

PREPARED BY

MultiTech

Due date
6-26-87

MAY 25 1988

AUG 21 2009

MONTANA STATE LIBRARY
S 628.16832 H2sbcB 1987 c.1 v.3 Tuesday
Silver Bow Creek remedial investigation
3 0864 00058139 0

DRAFT

SILVER BOW CREEK REMEDIAL INVESTIGATION
DRAFT FINAL REPORT

GROUND WATER AND POINT SOURCE INVESTIGATION
Part 3: Attachment V
Physical Data

Authors and Contributors:

David S. Tuesday, Co-principal Investigator
Myles Grotbo, Co-principal Investigator
William M. Schafer, Co-principal Investigator

Gordon Huddleston
Robert Trout
Clarence Whitworth
Bob Sheehan
Sandra S. Fitch
Heather Johnson
David Stiller
Salley Staley
Patrick Dunlavy

Submitted To:

Solid and Hazardous Waste Bureau
Department of Health and Environmental Sciences
Cogswell Building
Helena, Montana 59620

Submitted By:

MultiTech
A Division of MSE, Inc.
P.O. Box 4078
Butte, Montana 59701

Under Contract No. 50341-1202503

April 1987

MAY 15 1991

TABLE OF CONTENTS

ATTACHMENT V V-1

ATTACHMENT V-A SILVER BOW CREEK RI STATIC WATER LEVEL V-1

ATTACHMENT V-B SILVER BOW CREEK RI CONTINUOUS WATER LEVEL V-77

ATTACHMENT V-C SILVER BOW CREEK RI AQUIFER TEST DATA V-141

ATTACHMENT V-D SILVER BOW CREEK RI SOIL WATER CONTENT NEUTRON PROBE DATA, SOIL WATER POTENTIAL TENSIOMETER DATA AND PLOTS OF SOIL WATER VS.DEPTH. . . V-200

DRAFT

ATTACHMENT V-A
SILVER BOW CREEK RI STATIC WATER LEVEL

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-102 (SAME AS AMC # 6)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/18/85	32.93'	1.9'	9°C	6.21	1484	ELEV. = 5492.4
3/1/85	33.62'					TOP OF STEEL CAP
3/26/85	34.2'					(SURVEYED)
4/22/85	34.2'		8°C	6.3	1344	
7/10	34.4'					
12/10	35.8'			6.4	1320	Eh = +100 D.O. = 4.8 mg/l

WELL NO. DW-101

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-10-85	77.1'	2.1'		4.2	2370	M.P. ELEVATION 5509.8
						Eh = +100 D.O. = 4.5 mg/l
12-17-85	77.2'			5.0	2220	Eh = +240 D.O. = 4.3 mg/l

Digitized by the Internet Archive
in 2015

https://archive.org/details/silverbowcreekr1987tues_3

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-103 (SAME AS AMC #8)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-10-85	62.0'	2.0'		6.7	440	ELEV. = 5523.8 (SURV.)
12-18-85	62.5'			6.6	380	Eh = +170 D.O. = K 0

WELL NO. DW-106 (SAME AS AMC #15)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-10-85	90.4'	3.0'		6.5	560	ELEV. = 5555.7 (SURV.)
						Eh = +40
12-17-85	90.5'			6.4	480	Eh = +170 D.O. = 6.1

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-105 (SAME AS AMC #12)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1-18-85	20.44'	1.97'	9.5	4.86	3112	SM TURBID
3/1/85	20.85'					ELEV. = 5480.17
~~2/28/85~~	21.1'					TOP OF STEEL CAP (SURV.)
4/24/85	20.8'		9°	5.7	2806	TURBID
6-11-85	20.9'		12°	5.5	2472	EH = +160 M.V. D.O. = 2.4 D.O. IN WELL = .6
7-10	20.8'					
12-10-85	21.9'			6.2	2910	EH = +90 M.V.

WELL NO. DW-107 (SAME AS AMC #13)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1-18-85	19.3'	2.35'	9°	6.36	1531	HYDRAULIC FLUID ON SURFACE
3/27/85	19.6'					5475.77 - ELEV.
~~2/28/85~~	19.7'					TOP OF STEEL CAP
4/20/85	19.6'		9.5°	6.3	1390	(SURVEYED)
7-10	19.0'					
12-11-85	20.1'			6.5	1010	Eh = +140

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-108 (SAME AS MF-05)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-6-85	13.1'			5.8	1530	ELEV. = 5467.0 (SURV.)

WELL NO. DW-117 (SAME AS MF-03)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-6-85	4.8'			7.3	1610	ELEV. = 5447.3 (SURV.)

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-109 (SAME AS MBMG # MF-06)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/14/85	12.11'	.90'	5.3°	6.9	3050	ELEV. = 5405.11
3/6/85	11.8'		11°	6.0	2800	WOODEN PLATFORM
3/28/85	12.0'					(SURVEYED)
7-10	11.2					
12-6-85	12.6'			5.9	2740	

WELL NO. DW-110 (SAME AS MBMG # MF-07)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/14/85	7.4	.4'	9.0°	7.2	3420	ELEV = 5459.01
3/6/85	7.3'					TOP OF GALVANIZED
3/28/85	7.2'					COVER (SURVEYED)
4/24/85	7.3'		8.5°	6.2	3000	
7-10	7.3'					
12-6-85	6.9'			5.7	3140	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-111 (SAME AS MBMG MF-11)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/16/85	6.4'	.2'	7.0°	7.58	851	ELEV. = 5457.96
3/4/85	7.0'					WOODEN PLATFORM
3/28/85	7.0'					(SURVEYED)
7-10	6.0'					
12-6-85	6.9'				890	

WELL NO. DW-112 (SAME AS MBMG MF-09)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/16/85	9.4'	-.4'	8.0	7.9	1560	ELEV. = 5456.34
3/6/85	9.4'		8.0°	6.4	1518	WOODEN PLATFORM
3/28/85	9.1'					(SURVEYED)
6-11-85	8.9'		10.5°	6.3	1410	EH = +40 m.v. D.O. = 2.4 D.O. IN WELL = 2.0
7-10	8.9'					
12-6-85	9.3'			6.1	1390	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-113 (SAME AS MBMG MF#10)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/15/85	6.66'					S.W.L. ONLY
3/6/85	6.6'	.2'				ELEV = 5451.72
3/28/85	6.5'					WOODEN PLATFORM
7-10	6.4'					

WELL NO. DW-114 (SAME AS MBGMG # MF-08)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/14/85	3.58'	0.0'	8.5°	6.52	1982	5447.99
3/6/85	3.6'					WOODEN PLATFORM
3/28/85	3.3'					
6-11-85	3.0'		10.5°	6.4	2719	EH = +110 M.V. D.O. = 2.8 D.O. IN WELL = .8
7-10	3.3'					
12-6-85	3.5'			5.7	1960	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-115 (SAME AS MBMG # MF-04)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/14/85	14.4'	.5'	7.0	6.9	1780	ELEV. = 5459.06
2/6/85	14.5'					WOODEN FLATFILE
3/28/85	14.3'					(SURVEYED)
7-10	13.9'					
12-6-85	14.0'			7.3	1070	

WELL NO. DW-116 (SAME AS AMC WELL #23)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/18/85	5.73'	1.84'	9°	6.3	2560	ELEV. = 5478.29
2/1/85	5.66'					TOP of STEEL CAP
3/28/85	5.4'					(SURVEYED)
4/22/85	5.4'		7°C	6.4	2350	
6-11-85	5.2'		10.5°C	6.1	2430	EH = +130 m.v. D.O. = 1.6 D.O. MUELLER = 1.2
7-10	5.2'					
12-11-85	5.5'			6.2	2060	EH = +130 m.v.

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-118 (SAME AS AMC #24)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
11/15/85	9.4'	1.95'	9°	6.5	1110	MILKY
3/11/85	9.4'					ELEV. = 5451.05
3/28/85	9.3'					TOP OF [illegible]
4/22/85	9.2'		8.5°	6.6	1110	
7-10	9.2'					
12-11-85	9.4'			6.5	960	Eh = +90 m.v.

WELL NO. DW-119 (SAME AS MBMG # MF-02)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
11/16/85	13.1'	0.0'	8.5°	7.3	4120	ELEV. = 5445.59
3/6/85	13.9'					TOP OF GALVANIZED
3/28/85	13.5'					COVER
4/22/85	13.6'		10°	6.8	3590	
6-11-85	13.8'		14°	6.7	2870	Eh = -100 m.v. D.O. = 2.2 D.O. IN WELL = .7
7-10	13.6'					
12-9-85	13.8'			6.8	3740	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-120

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84	3.05	0.77'				LOG - GW AVAIL. IN SPRING ELE. = 5460 (TOPO)
2/27/85						FROZEN
3/28/85						FROZEN

WELL NO. DW-121 (SAME AS MONG # MF-01)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/10/85	3.7'	0.0'	7.0°	7.7	399	ELEV. = 5443.05
3/4/85	3.6'		7.0°	6.8	393	TOP OF CALVAN. 2x1
3/28/85	3.5'					COVER
7-10	3.5'					
7-25	3.6'		10°	6.8	446	Eh = +225
12-6 85	3.5'			6.9	445	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-122 (SAME AS MBMG WELL # MP-3)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
11/18/85	21.0'	1.0'	8°	7.1	907	NO OIL IN SAMPLE
3/6/85	21.1'					
3/28/85	20.9'					
7-10	20.7'					

WELL NO. DW-123 (SAME AS MBMG # MP#T #1)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
11/18/85	6.60'	-.3'	8.0°	6.93	973	NO MEASURABLE OIL A FEW DROPLETS ON SCAF.
3/6	6.8'					
3/28/85	6.5'					
7-10	6.4'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-124 A (SAME AS MP 1A)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/18/85						OIL, M-SCOPE WON'T WORK
3/6/85	5.0'	0.0'				OIL
3/28	5.7'					
7-10	5.9'					

WELL NO. DW-124 B (SAME AS MP2)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/18	6.75'	.5'				
3/6	6.9					
3/28	6.5'					
7-10	6.6'					

SITLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. 124C (SAME AS MP4)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/18	4.90'	0.0'				
3/6	5.0'					
3/28	4.6'					
7-10	4.6'					

WELL NO. 124D (SAME AS MP6)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/18	7.30'	-.4'				
3/6	7.5'					
3/28	7.2'					
7-10	7.3'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. 124 E (SAME AS MP6A)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/18	7.70'	-.5'				
3/6	7.7'					
3/28	7.4'					
7-10	7.4'					

WELL NO. 124 F (SAME AS S1)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/18	9.30'	1.9'				T.D. = 21'
3/6	9.4'					
3/28	9.0'					
7-10	9.0'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-124G (SAME AS MP-7)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
3/4/85	3.6'	-.4'				T.D. = 10'
3/28	3.3'					
7-10	3.3'					
12-11-85	3.5'			6.9	880	EH = +160

WELL NO. DW-125 (SAME AS MPST #5)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/18/85	9.24	2.2'	8.0°	7.0	1040	T.D. = 18.1 NO O/G, FAINT SMELL
3/6	9.3'					
3/28	8.9'					
7-10	9.0'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-127
ELE = 5419 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/18	6.6'	1.5'				MONITORING WELL @ STORAGE YARD (NO LOG)
3/28	5.6'					
4/22	4.5'					

WELL NO. DW-130 (NE-2, NORTH OF CO. TAILS)
ELEV. = 5435.1 (SURVEYED)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
4/22/85	13.7'	2.8'	7°	7.0	1250	T.D. = 20'
7/25	13.8'		9°	6.8	1340	Eh = +325
12-11-85	13.7'			7.1	1080	Eh = +110

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-128
ELE = 5510 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/7/85	19.15'	1.69'				NO LOG - QW AVAIL. BY BAILER
1/16/85	19.20'	1.50'	7°	6.8	470	
2/27/85	19.68'	1.70'				
3/28/1	19.7'					

WELL NO. DW-129 ELE = 5530 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/7/85	14.49'	0.65'	8.0°	6.96	900 (adj)	LOG (PARTIAL) -
2/27/85	13.64'	0.65'				
3/28	14.1'					
3/28	14.1'		9°C	7.04	830	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-131 (SWEDE'S BODY SHOP)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-11 85	10.0'	2'		7.0	950	ELEV. = 5447.9 (SURVEYED)
1-8-86	12.0'			7.2	1260	Eh = +165 D.O. = 2.6

WELL NO. DW-132 (STP DEWATERING WELL)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-11 85	6'	1'		6.6	990	Eh = +160
						ELEV. = 5432.0 (SURV.)

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-133 (SAME AS MBMG WELL # S-1)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-11 85	9.2'	2.1		7.5	1040	ELEV. = 5438.9 (SURV.)
1-8 86	9.4'			6.7	1230	Eh = +155 D.O. = 3.2

WELL NO. DW-134 (SAME AS MBMG WELL CT-84-1)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-11 85	12.3'	+3.9'		6.5	1090	ELEV. = 5448.5 (SURV.)
1-8 86	12.5'			6.3	1310	Eh = +155 D.O. = 2.7

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-135 (SAME AS MBMG 5-5)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-11 85	13.0'	3.7'		7.5	620	ELEV. = 5436.8 (SURV.)
						Eh = +140
1-8 86	13.3'			7.0	470	Eh = +180 D.O. = 6.4

WELL NO. DW-136 (SAME AS WELL MBMG CT-84-2)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-12 86	4.9'	1.9'		5.5	1300	ELEV. = 5435.0 (SURV)
						Eh = +200
1-8 86	4.9'			5.5	1550	Eh = +220 D.O. = 4.7

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-137 (SAME AS MBMG CT-84-3)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-12-86	3.3'	1.0'		5.7	1960	ELEV. = 5433.5 (SURV) Eh: +170
1-8-86	3.5'			5.2	2120	Eh = +250 D.O. = 5.6

WELL NO.

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-202 - ELE. = 5382 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/18/84	28.60'	-8.0'				LOG - PARTIAL
1/7/85	30.06	-8.0'	10°	7.90	1477 adj	QW - P.M. BEST TIME
4/24	28.9'		10°	7.2	1416	

WELL NO. DW-203 - ELE. = 5420 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/18/84	FOSSIELE		14.0°	7.66	630	LOG
1/7/85	"		11.0°	7.59	706	
4/24/85			9°	7.4	707	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-204 ELE = 5385 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84	44.90	0.40	5.0°	6.03	395 adj.	LOG - GOOD FOR QW & SWL
1/7/85	45.60		18.5	7.25	455 adj.	
2-28	45.62'		10°	7.61	452	
3/28	45.5'					
4/24	45.4'		10°	7.3	432	
7-10	45.8'					

SWL ONLY

WELL NO. DW-205 ELE = 5365 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84	22.00'		6.0°	6.45	347 adj.	LOG -
1/8/85	22.10'	~~0.45~~				
2-28	22.09'	-6.60				
3/28	22.04'					
7-10	22.3'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-206 - ELE = 5360 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/18/84	NOT RECEPTIVE		10.0°	6.20	690	LOG (PARTIAL)
1/7/85			10.5°	7.29	873	
4/24			9°	7.3	820	

WELL NO. DW-207 ELE = 5360 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/18/84			11.0°	6.14	980 adj.	NO LOG - POSSIBLE EWL ON IRRIGATION WELL
1/7/85			11.0°	7.63	1067 adj.	
2-28			12.5°	7.71	1250	
4/24			11°	7.3	1087	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-208 ELE = 5360 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
V7/85	12.12'	1.32'	8.0°	7.54	693 adj.	~~No Log~~ QW & SWL Good
2-28	12.13'					
* 3/28	7.0'					
4/24	7.2'		12°	7.3	687	

WELL NO. DW-210 ELE = 5360 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/21/84			10.0°	7.21	525 adj.	
V7/85	1.72'	(-1.0) 0.32'	10.0°	7.54	591 adj.	WELL IN HOUSE - NEED PERSON HOME TO SWL
4/24	1.7'		12°	7.3	581	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

~~355'~~

WELL NO. DW-212 ELE = 5315 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/21/84			5.0°	7.28	632 (adj)	LOG (PARTIAL)
1/7/85	AVAIL. IN SPRING		4.5°	7.24	735 adj	✓ PVC WELL FOR MONITORING
4/24			7.0°	7.1	711	

WELL NO. DW-213 ELE = 5355 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/20	11.25'	6.0 (1.15)	6.0°	7.31	385	NO LOG
1/9/85	11.52'		8.0°	7.06	494	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-218 (SAME AS MONG SLUDGE, SITE-G)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/[illegible]/85	36.05'		7.0°	7.15	331	
3/1/85	35.70'					

WELL NO. DW-215

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1-8-85	11.52	1.15	8°	7.06	494	Sulfur odor
4/24	10.35		8°	7.2	346	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-221 ELE = 5330 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/20/84	28.95'	2.80'				GOOD LOG
1/8/85	29.37'	—				
2/28	29.89'					
3/28	29.31'					

SWL ONLY

WELL NO. DW-226 ELE = 5300 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/20	18.0'	0.20'				
1/8/85	18.15'					
2/28	18.31'					
3/28	18.31'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-227 ELE = 5320 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/5/85	23.42'	1.36'				LOG - BAILER FOR 3IN
2/28	23.67'	1.65				
3/28	23.51'					

WELL NO. DW-229 ELE = 5310 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84			5.5°	7.18	624 adj.	NO LOG -
1/8/85	9.02'	1.35	8.0°	6.93	644 adj.	
2/28	7.11'					
3/28	7.03'					
4/24	6.6'		6°	7.0	606	
7-10	7.1'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-230 ELE = 5315 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/21/84			5.0°	7.14	553 adj	NO LOG - SWL IN SPRING
1/9/85			8.0°	7.13	591 adj	best in afternoon works nights
4/24			8.0°	7.2	575	

SWL only

WELL NO. DW-231 ELE = 5330 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/21/84	20.35'	1.02'				
1/9/85	20.58'					
2/28	20.79'					
3/28	20.60'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-301 ELE: 5145 (TOFO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/20/84	30.00	-7 (0.4)	6.0°	6.85	278 adj.	LOG - NEED PERSON HOME TO SAMPLE FRIDAYS BEST
1/4/85	30.00	-7'	5.5	5.76	281 adj.	
2/28	30.34'	-7'				
3/28	30.05'					

SWL ONLY

WELL NO. DW-302 ELE = 5130 (TOFO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
						NO LOG

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-303 ELE = 5130 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
2/28	12.63'	-6.0'				

WELL NO. DW-304 ELE = 5120 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/8/95			9.5°	7.01	679 adj	LOG NO SWL CURRENTLY

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-305 ELE = 5150 (TOTO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
						GOOD LOG

SWL ONLY

WELL NO. DW-306 ELE = 5185 (TOTO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/9/85	33.48'					NO LOG
2-28	33.71'	-5.8'				
3/28	33.36'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-307 ELE = 5175 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/18/85	32.85'	NEED				
2/28	32.40'	0.0'				
3/28	32.51'					

WELL NO. DW-309 ELE = 5045 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84			9.0°	6.65	604 adj.	NO LOG
4/4/85	61.87'	1.73'	7.0°	7.21	463 adj.	
2/28	62.67					
3/28	03.23'					
4/24	63.5		7°	7.3	606	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-310 ELE = 5045 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
2/28	64.46'	+1.40'				GOOD LOG - IRRIGATION WELL
3/28	64.97'					

TRAILER CT WELL

WELL NO. DW-311(A) ELE = 5045 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84			8.0°	7.08	1304 adj.	No SWL -
4/4/85			9.0°	6.94	1006 adj.	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

IRRIGATION WELL

WELL NO. DW-311(6) ELE = 5045 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/4/85	48.98'	1.64'				
2/28	48.59'					
3/28	48.79'					

WQ ONLY

WELL NO. DW-312 ELE = 5045 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19			7.5°	7.09	802 adj.	NO LOG - WQ ONLY
1/8/85			9.0°	7.17	836 adj.	
4/24			8°	6.9	744	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-313 ELE = 5045 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/18	11.55'	NEED				
2/28	11.02'	+3"				
* 3/28	5.16					

WELL NO. DW-314 ELE = 5050 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/21/84	28.45'	1.88'	9.0°	7.18	937 adj	LOG -
1/8/85	28.78'		9.0°	7.44	903 adj	
2/28	29.00'					
3/28	29.19'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-318 ELE = 5050 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84	7.05'	1.94'	8.5°	6.80	792 adj.	GOOD LOG
1/4/85	7.24'		8.0°	6.70	840 adj.	
2/28	7.41					
3/28	7.86'					
4/24	7.4'		6°	6.8	744	

WELL NO. DW-319 ELE = 4985 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/9/85	14.40'	1.59'				
1/14/85	14.40'		7°C	5.96	502	
2/28	14.50'					
3/27	14.6'					

STILLER AND ASSOCIATES, INC.

(GROUND WATER FIELD DATA FORM

WELL NO. DW-320 ELE=4995 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/9/85	42.00'	0.85'				NOT DRILLABLE DUE TO NAILS & OTHER OBSTRUCTIONS IN WELL
1/17/85	42.00'					
2/28	42.55'					
3/27	42.8'					

WELL NO. DW-321 ELE = 4985 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/9/85	11.08'	.85'				
1/17/85	11.60'		9°	7.27	492	
2/28	11.18'					
3/27	11.1'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-322 ELE = 4995 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
2/28	7.13'	1.28'				OBTAINABLE THRU SIMMENTHAL RANCH
3/28	6.88'					

SWL ONLY

WELL NO. DW-325 ELE = 4960 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/20/84	9.60'	1.77				
2/28	9.52'					
3/27	9.3'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-326 ELE = 4955 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks

SWL ONLY

WELL NO. DW-327 ELE = 4950 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
2/28	4.73'	1.67'				
3/27	4.6'					
4/24	4.6'		9.5°	7.2	209	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-328 ELE = 4938 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84			11.0°	7.38	164 adj.	LOG HOUSE WELL
1/4/85			8.0°	7.15	182 adj.	QW ONLY

QW & SWL ~~DAILY~~

WELL NO. DW-329 ELE = 4940 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84	5.61'	1.45'	7.0°	8.27	110 adj.	WELL BEHIND HOUSE
1/4/85	5.64'					
1/17/85	5.74'		8.0°	7.38	194	
2/28	5.91'					
3/27	5.9'					
7-10	6.7'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-333 ELE = 4950 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84	7.77'	NEED				
2/28	7.81'	0.70				
3/27	7.7'					

SWL ONLY

WELL NO. DW-335 ELE = 4945 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/20/84	2.83'	0.87'				
2/28	3.13'					
3/27	3.1'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-337 (DAN COSTLE)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
2/28	8.29					
3/27	8.1		13°	6.16	401	
4/24	7.8		5°	6.9	385	

WELL NO. _____

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

ELE: 4930 (TOPO)

WELL NO. DW-336 * SHOULD ✓ NEXT DOOR (TRAILER TO S.) FOR SWL · COSTRE NAME) DANIEL

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/20/84			6.0°	5.98	453 adj	NO LOG GW-ONLY
4/4/85			7.0°	6.55	448 adj	

WELL NO. DW-340 ELE = 4891 (TOPO) SURVEYED (SAME AS AMC WELL # 29)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
11/7/85	8.25'	2.86'	7.5°	6.41	3368	
2/28	8.16'					
3/28	8.93'					
7-10	9.0					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-401 ELE=4891 (TOPO)
(SAME AS AMC WELL # 28)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/17/85	6.34'	2.56	7.0°	6.49	3313	
2/28	6.47'					
7-10	6.8'					

WELL NO. DW-403 ELE=4875 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/17/85	10.40'	2.65'	8.0°	6.77	2747	
3/1	10.60'					
3/28	10.34'					
7-10	8.1'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-404 ELE: 4875 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/17/85	12.10'	2.60'	7.5°	7.37	1717	
3/1	13.38'					
3/28	13.17'					
7-10	12.4'					

WELL NO. DW-405 ELE = 4825 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84	17.60'	2.55'	10.5°	6.95	977 adj	LOG
1/7/85	17.05'		9.0°	7.25	1236 adj.	
2/28	16.71'		8°	7.22	1145	
3/27	20.9'					
4/24	19.7'		10°	7.0	1193	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-407 ELE: 4860 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84	68.28'	1.65				LOG
1/8/85	68.20'					
2/28	68.40'					
3/27						ICED UP @ 20'

QW ONLY

WELL NO. DW-408 ELE = 4880 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/18/84			8.0°	7.05	378 adj.	QW ONLY - NO SWL LOG
1/7/85			9.0°	7.16	456 adj.	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-411 ELE = 4892 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/18/84	31.59'	0.70'	8.0°	7.33	500 adj.	PARTIAL LOG
1/7/85	31.95'		8.0°	7.01	605 adj.	
2/28	32.49'					
3/27	32.5'					

WELL NO.

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-501 ELE = 4790 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/18/84			6.0°	7.13	374 adj.	QW ONLY PARTIAL LOG
1/6/85			8.0°	7.14	428 adj	

WELL NO. DW-502A ELE = 4785 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84	17.25'	1.58'	8.0°	7.16	580 adj.	LOG - RED WELL DOMESTIC & STOCK/DOWN BY CORRAL
1/6/85	1782'	"	8.0°	6.98	576 adj	
2/28	18.05'					
3/27	17.9'					
7-10	16.0'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-502^B ELE: 4788 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/8/85	20.30'	1.32				NO LOG AT WHITE HOUSE
2/28	20.60'					
3/27	20.5'					

SWL ONLY

WELL NO. DW-502^C ELE = 4840 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/8/85	75.61'	1.60'				LOG - WELL TO NEW BRICK HOUSE
2/28	76.08'					
3/27	76.0'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. DW-504 ELE = 4700 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84	20.92	-10.0 (0.2)	9.0°	6.78	1130 adj.	PARTIAL LOG
1/8/85	20.93'		8.0°	6.66	1120 adj.	

WELL NO. DW-505 ELE = 4680 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84			5.0°	7.02	381 adj.	NO SWL - NO LOG
1/8/85			5.0°	6.87	348 adj.	

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-507[A] ELE -4690 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84	4.36'	1.38'				GEM BAR AT YELLOW COTTAGE - NO LOG
1/8/85	4.47'					
2/28	4.19'					
3/27	4.2'					

SWL ONLY

WELL NO. DW-507[B] ELE: 4690 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1/8/85	14.45'	1.45'				RACETRACK > GOOD LOG FIREHALL
2/28	14.55'					
3/27	14.2'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-509 ELE=4640 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/19/84	6.22'	0.58'				LOG PARTIAL
1/9/85	6.23'	"				
2/28	6.14'					
3/27						SLEEPING

SWL ONLY

WELL NO. DW-510 ELE=4690 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/20/84	28.94'	1.33'				LOG PARTIAL
1/10/85	28.89'					
2/28	28.84'					
3/27	29.0'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-511 ELE=4670 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/21/84	50.25'	1.35'				GOOD LOG
1/8/85	49.05'	"				
3/1	48.98'					
3/27	49.0'					

SWL ONLY

WELL NO. DW-512 ELE=4645 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/20/84	7.67'	1.00'				GOOD LOG
1/8/85	7.70'					
3/1	7.60'					
3/27	7.6'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY
WELL NO. DW-514 ELE = 4680 (TOPO)
BEWARE OF DOGS!

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/20/84	6.30'	1.42'				GOOD LOG
1/9/85	6.40'					
2/28	6.33'					
3/27	7.1'					

SWL ONLY
WELL NO. DW-517 ELE = 4650 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/21/84	5.86'	1.14'				GOOD LOG
1/9/85	5.98'					
2/28	5.96'					
3/27	5.6'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-518 ELE = 4655 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12/20/84	14.59'	1.51'				GOOD LOG
1/6/85	14.95'					
2/28	15.35'					
3/27	14.8'					

SWL ONLY

WELL NO. DW-519 ELE = 4650 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
3/1	54.6'	1.8'				
3/27	54.6					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

SWL ONLY

WELL NO. DW-520 ELE= 4640 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks

WELL NO.

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. GS-01

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1-15-85	3.33'	1.40'	6°	6.96	367	
2-28-85	3.49'		8°	6.75	385	TURBID
3-28-85	3.36'		4°	6.6	361	
4-18	2.96'					
5-8	3.29'					*△ S.U. ?
6-11	3.5'		10°	7.0	345	EH = +110 m.v. D.O. = 4.1 D.O. IN WELL = 2.2
7-10	3.5'					

WELL NO. GS-02

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1-15-85	3.70' *	2.25'	5	6.69	345	* FROZEN
2-28-85	3.70'					FROZEN S.C.
4-18	3.42'					
5-8	3.68'					*△ S.U. ?
6-11	3.5'		9°	6.5	331	EH = +20. m.v. D.O. = 3.6 D.O. IN WELL = 1.8
7-10	3.7'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. GS-03

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1-15-85	6.35'	1.20'	8	7.45	477	
2-28-85	6.56'		9	7.15	455	
3-28	6.57'		6	6.84	487	
4-18	6.39'					
5-8	6.60'					
6-11	6.5'		9.5°	6.8	492	EH = +170 M.V. D.O. = 4.5 D.O. IN WELL = 5.1
7-10	6.5'					

WELL NO. GS-04

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
1-15-85	7.66'	1.17'	4	7.68	617	
2-28-85	7.87'		7	7.16	476	
3-28	7.89'		4	6.6	482	
4-2	7.79'					
4-18	7.92'					
5-8	7.84'					
6-11	7.8'		10°	6.8	489	EH = +250 M.V. D.O. = 5.6 D.O. IN WELL = 6.5
7-10	7.7'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. GS-05

ELE. = 5270 (TOPO)

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
3/28/85	6.75'	1.9'	7°	6.63	589	ARTESIAN PRESSURE EVIDENT
5-8	6.6'					
6-12	6.8'		10°	6.7	1022	EH = +70 M.V. D.O. = 2.6 D.O. IN WELL = 1.1
7-10	7.6'					
12-12-85	7.6'					
6-12-86	7.2'					

WELL NO. GS-06

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
3/28/85	7.05'	1.9'	6°	6.51	1192	ARTESIAN PRESSURE
5-8	6.9'					
6-12	7.1		10°	6.2	1123	EH = +50 M.V. D.O. = 2.0, D.O IN WELL = 1.1
7-10	7.8'					
12-12-85	7.7'					
6-12-86	7.4'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. GS-07

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
11-22-85	21.3	1.9				DURING COMPLETION
12-18-85	25.1					
1-8-86	25.1					
1-14-86	25.1					AQUIFER TEST
6-13-86	25.1					

WELL NO. GS-08

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
11-26-85	12.4	1.5				IMMEDIATELY AFTER COMPLETION
12-18-85	11.5					
1-7-86	11.4					
1-15-86	11.3					AQUIFER TEST
6-13-86	11.0					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. GS-09

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
11-27-85	10.9	1.0				
12-18-85	10.5'					
1-7-86	10.5					
1-15-86	10.4					AQUIFER TEST
6-13-86	10.1					

WELL NO. GS-10A

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-18-85	20.3	0.8				
!						
1-8-86	19.9					
1-15-86	21.9					
1-14-86	21.8					AQUIFER TEST
6-13-86	21.8					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. GS-10B

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-4-85	19.9	0.8				
12-18-85	22.1					
1-8-86	19.9					
1-14-86	19.9					AQUIFER TEST
6-13-86	19.6					

WELL NO. GS-11

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-3-85	11.0	1.1				
12-16-85	11.7					
1-7-86	11.3					
1-15-86	11.1					AQUIFER TEST
6-13-86	10.5					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. 65-12

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-11-85	9.6	1.5				
12-19-85	9.7					
1-7-86	9.9					
6-13-86	9.5					

WELL NO. 65-13A

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-18-85	6.2	1.65				
12-19-85	6.2					
1-8-86	6.4					
1-16-86	6.4					AQUIFER TEST
6-13-86	5.6					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. GS-13B

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-19-85	5.8	1.1				
1-8-86	6.0					
1-16-86	6.0					
6-13-86	5.3					

WELL NO. GS-14

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-20-85	9.3	1.6				
1-8-86	9.3					
6-13-86	8.9					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. GS-15A

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-17-85	9.5	.9				
12-19-85	9.5					
1-7-86	9.6					
1-16-86	9.5					
6-13-86	9.2					

WELL NO. GS-15B

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
12-17-85	9.8	.7				
12-19-85	9.8					
1-7-86	9.9					
1-16-86	9.8					
6-13-86	9.5					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. TS-01

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
3/28	9.8'	+1.5'	6°C	6.68	812	ALLUVIAL WELL
4-18	8.97'					
5-8	9.5'					S.U. = 2.4' FROM GS.
6-11	9.7'		8°	6.5	795	EH = +135 M.V. D.O. = 2.5 D.O. IN WELL = 1.0
7-10	9.9'					
7-25	9.95'		7°	6.8	868	Eh = +80

WELL NO. TS-02

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
3/28/85	9.8'	+1.5'				TAILINGS WELL
5-8	9.36'	2.3'				
7-10	9.8'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. TS-03

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
3/28/85	10.15'	1.98'				ALLUVIAL OBS. WELL
4-18	8.68'					
5-8	9.3'					S.U. = 2.2'
7-10	9.7'					

WELL NO. TS-04

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
3/28	9.42'	1.75'				ALLUVIAL OBS. WELL
4-18	8.47'					
5-8	9.0'					S.U. = 2.0'
7-10	9.4'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. TS-07

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
3/28	9.95'	2.16'				TAILING WELL OBS.
5-8	9.4'					S.U. = 2.4'
7-10	9.5'					

WELL NO. _____

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. TS-08

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
3/28/85	LYSIMETER	SET AT	3.5	NO	SAMPLE	RECOVERED YET

WELL NO. TS-09

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
3/28/85	LYSIMETER	SET AT	5.5	NO	SAMPLE RECOVERED	YET

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. TS-10

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
3/14/85	LYSIMETER SET @ 7.5'					50 ML SAMPLE RECOVERY
3/15/85						25 ML SAMPLE
3/19/85						50 ML SAMPLE
3/28						250 ML SAMPLE
4/10						370 ML SAMPLE
4/24			4.5°	7.0	3444	400 ML SAMPLE
5/10						75 ML SAMPLE GW PART
6/16			12°	6.8	3021	280 ML
7/24			12°	6.9	3354	400 ML

WELL NO. TS-11

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
3/14	LYSIMETER SET @		9.5'			125 ML SAMPLE RECOVERY
3/15						100 ML SAMPLE
3/19						75 ML SAMPLE
3/28			5°	7.72	5167	450 ML SAMPLE
4/24			5°	7.0	3816	450 ML SAMPLED FOR GW PART.
5/10						65 ML SAMPLED FOR GW PARTI.
6/18			7.0°	7.0	3470	350 ML
7/24			11.0	7.3	2980	400 ML

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. TS-12

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
4-18	8.15					
5-8	8.4'					
7-10	8.7'					

WELL NO. TS-13

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
4-18	6.58'					
5-8	6.4'					
7-10	6.8'					

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. TS-14 LYSIMETER

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
6/18			9.5°		2570	400 mL WASTED
6/19			12°	6.2	2240	400 mL
6/28			19°	6.3	1927	400 mL
7/24			12°	6.3	1960	375

WELL NO. TS-15

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
6/18			12°		1070	400 mL
6/19			18	6.4	1780	250 mL
6/28			18°	6.2	1830	400 mL
7/25			20°	6.8	1800	100 mL

STILLER AND ASSOCIATES, INC.

GROUND WATER FIELD DATA FORM

WELL NO. TS-16 LYSIMETER

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks
6/18			18	1.	2760	400 mL
6/18			18		45-00	250 mL
6/19			23°	5.1	7170	200 mL
7/24			20°	4.9	7580	300 mL

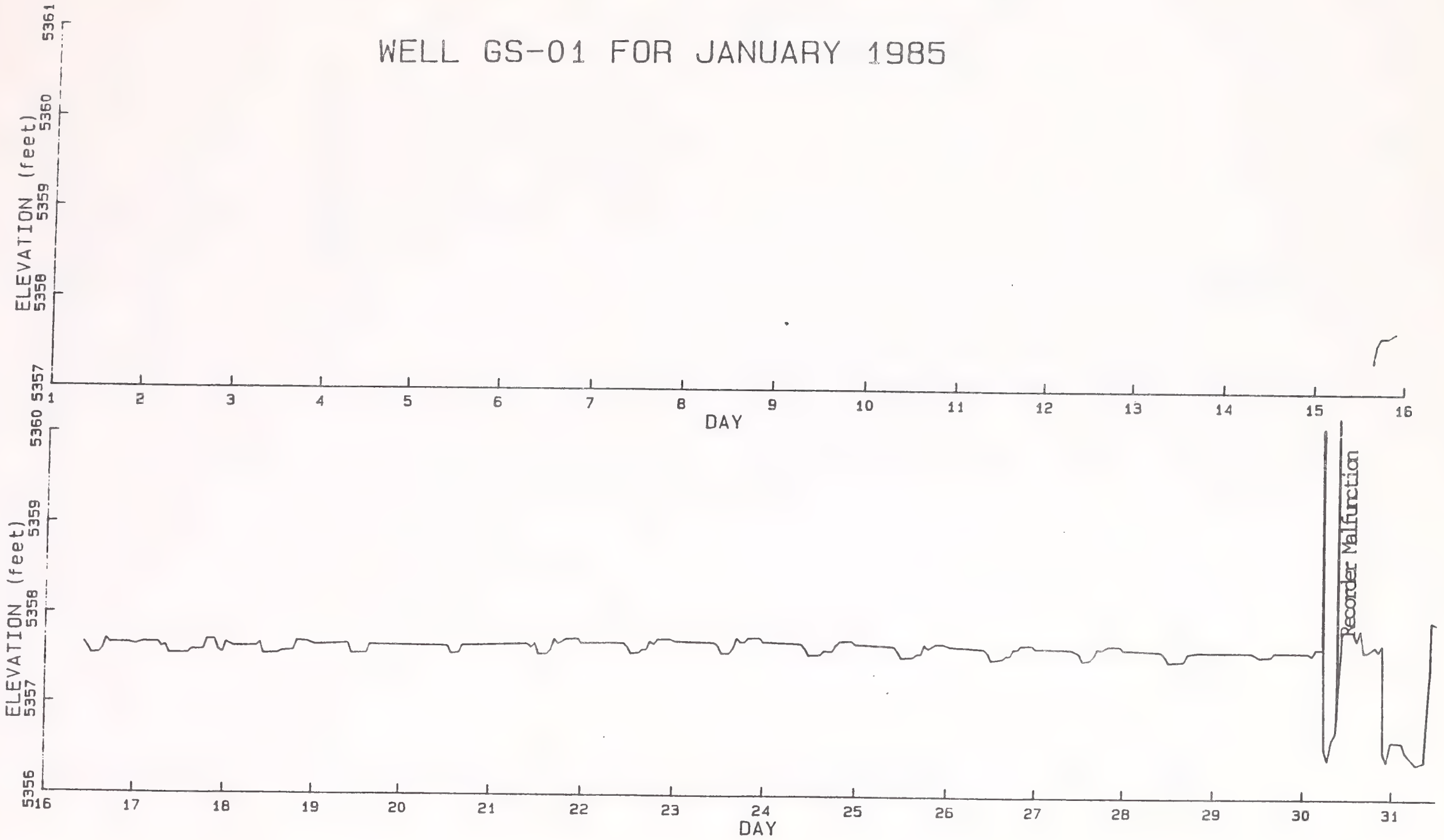
WELL NO. _____

Date	S.W.L. (ft. below M.P.)	Casing stickup (ft)	Temp (°C)	pH (S.U.)	S.C. (umhos @ 25°C)	Remarks

DRAFT

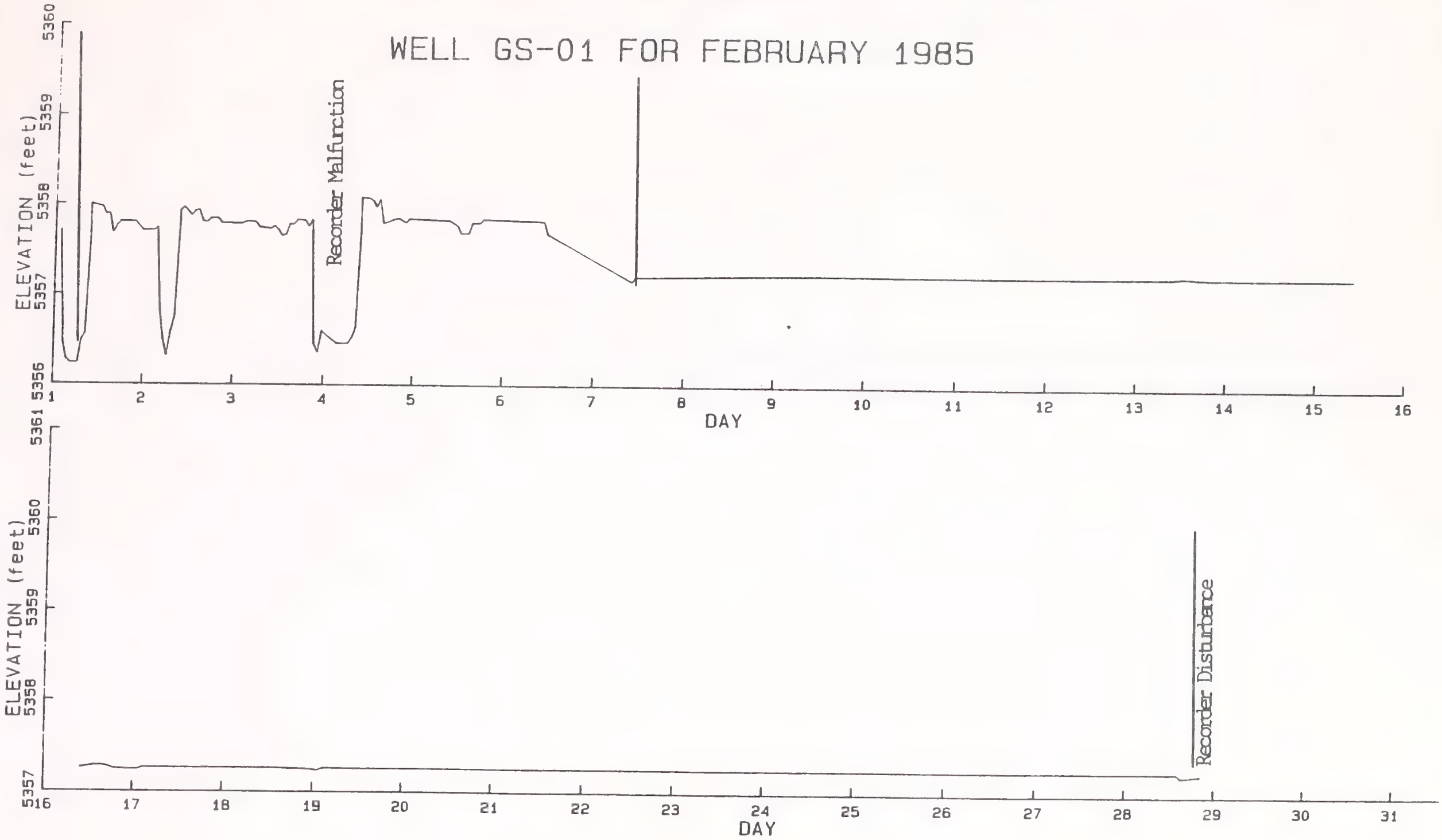
ATTACHMENT V-B
SILVER BOW CREEK RI CONTINUOUS
WATER LEVEL

GROUND WATER ELEVATION OF MONITORING WELL GS-01 FOR JANUARY 1985



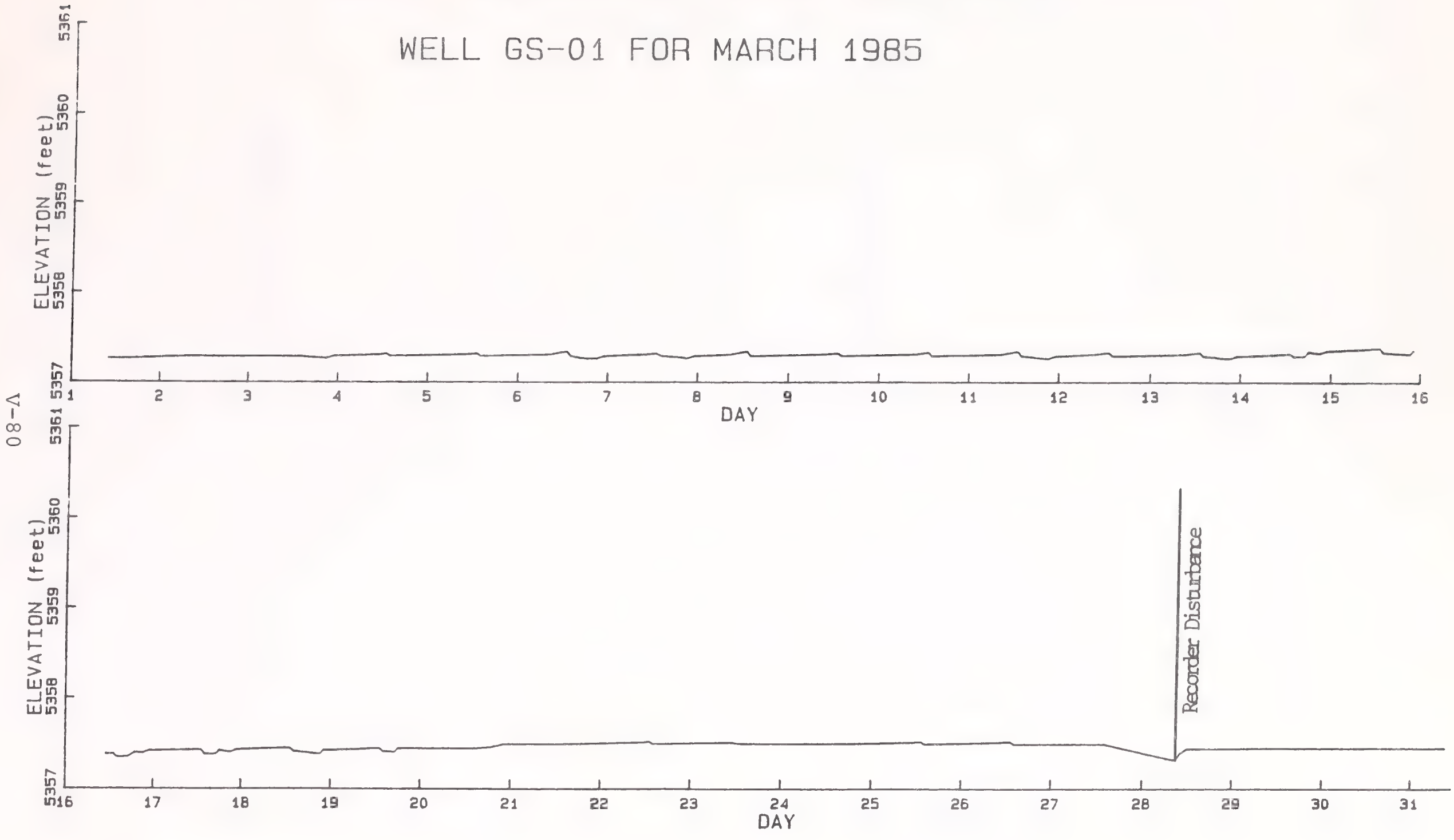
GROUND WATER ELEVATION OF MONITORING

WELL GS-01 FOR FEBRUARY 1985

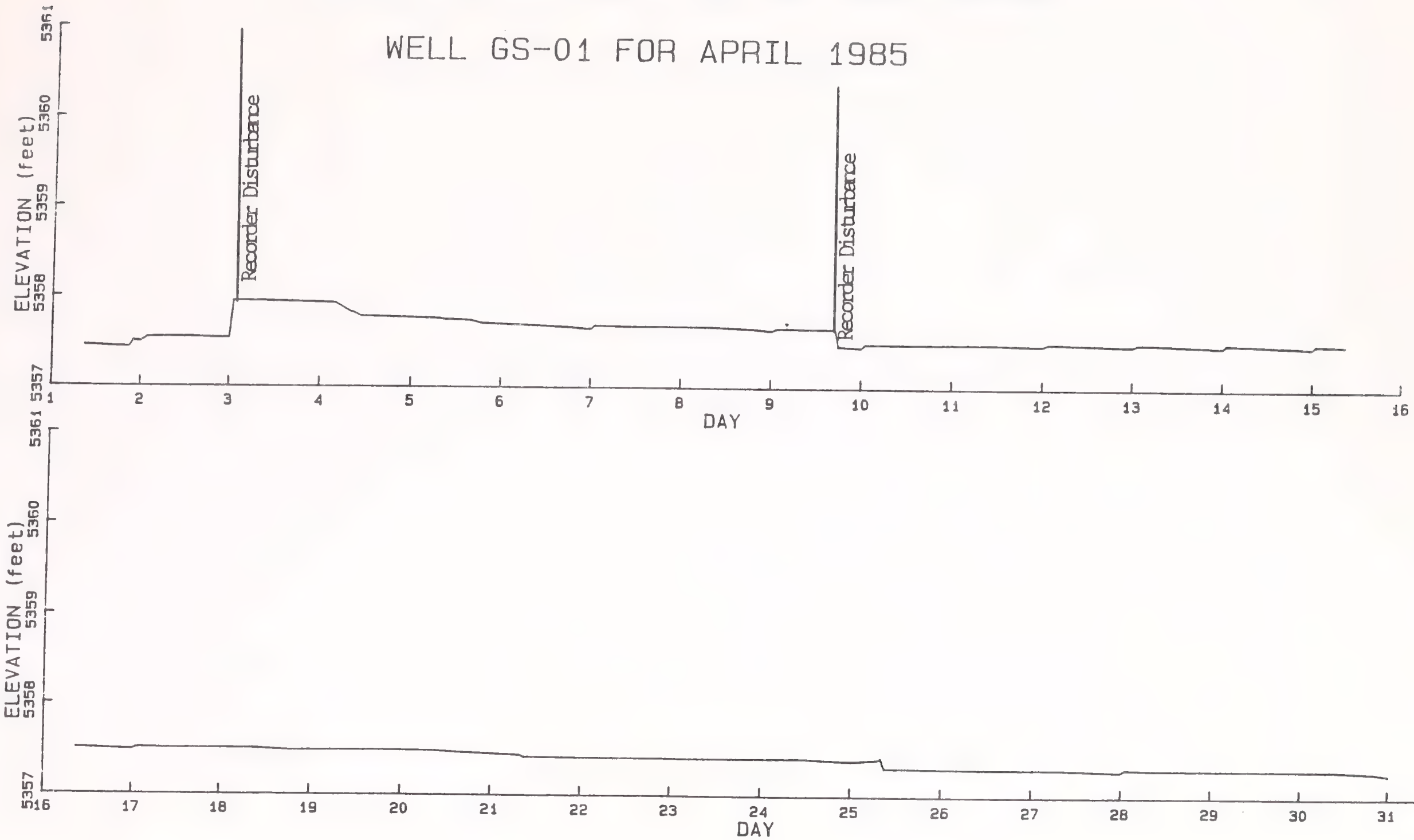


GROUND WATER ELEVATION OF MONITORING

WELL GS-01 FOR MARCH 1985

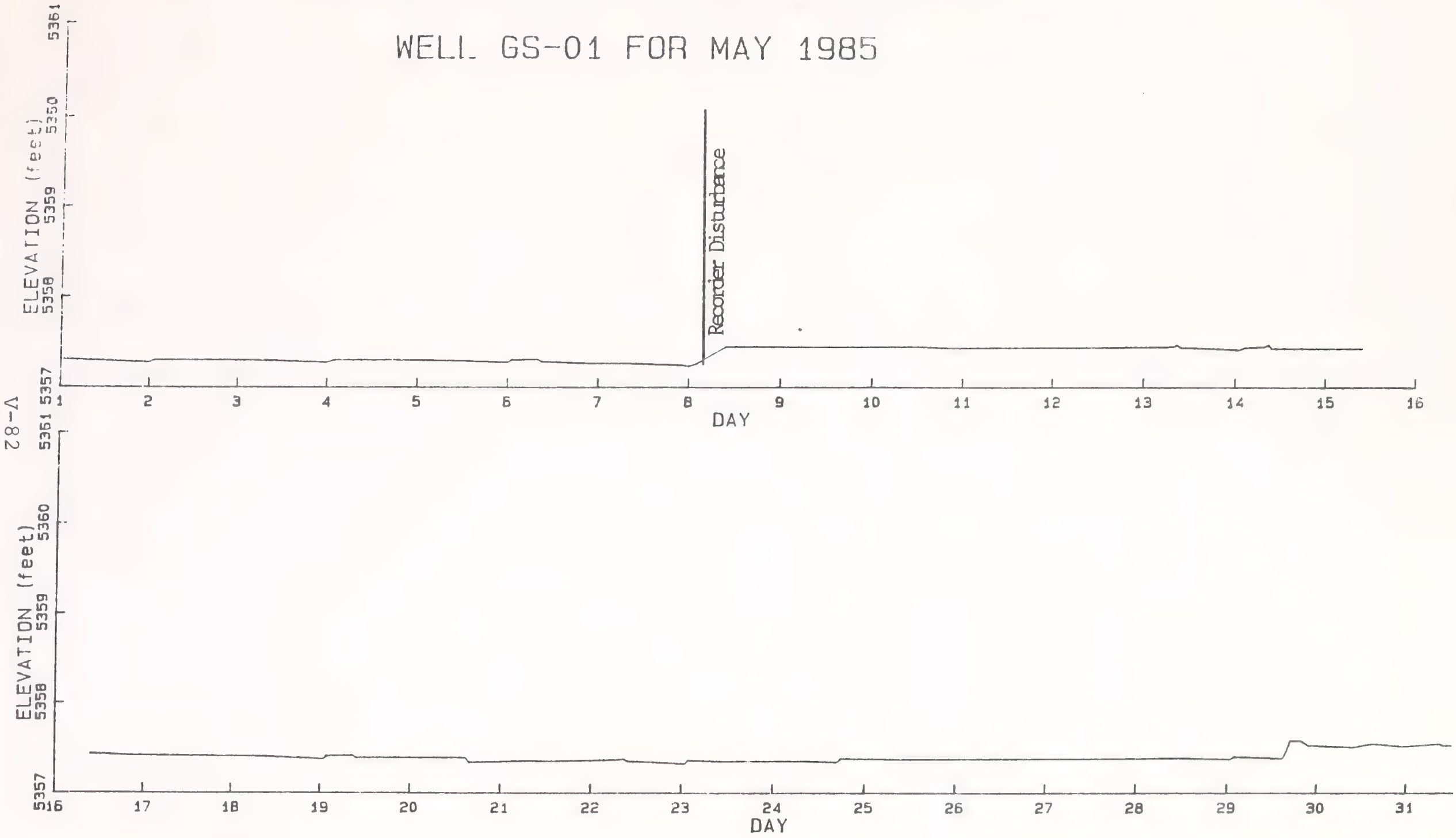


GROUND WATER ELEVATION OF MONITORING WELL GS-01 FOR APRIL 1985

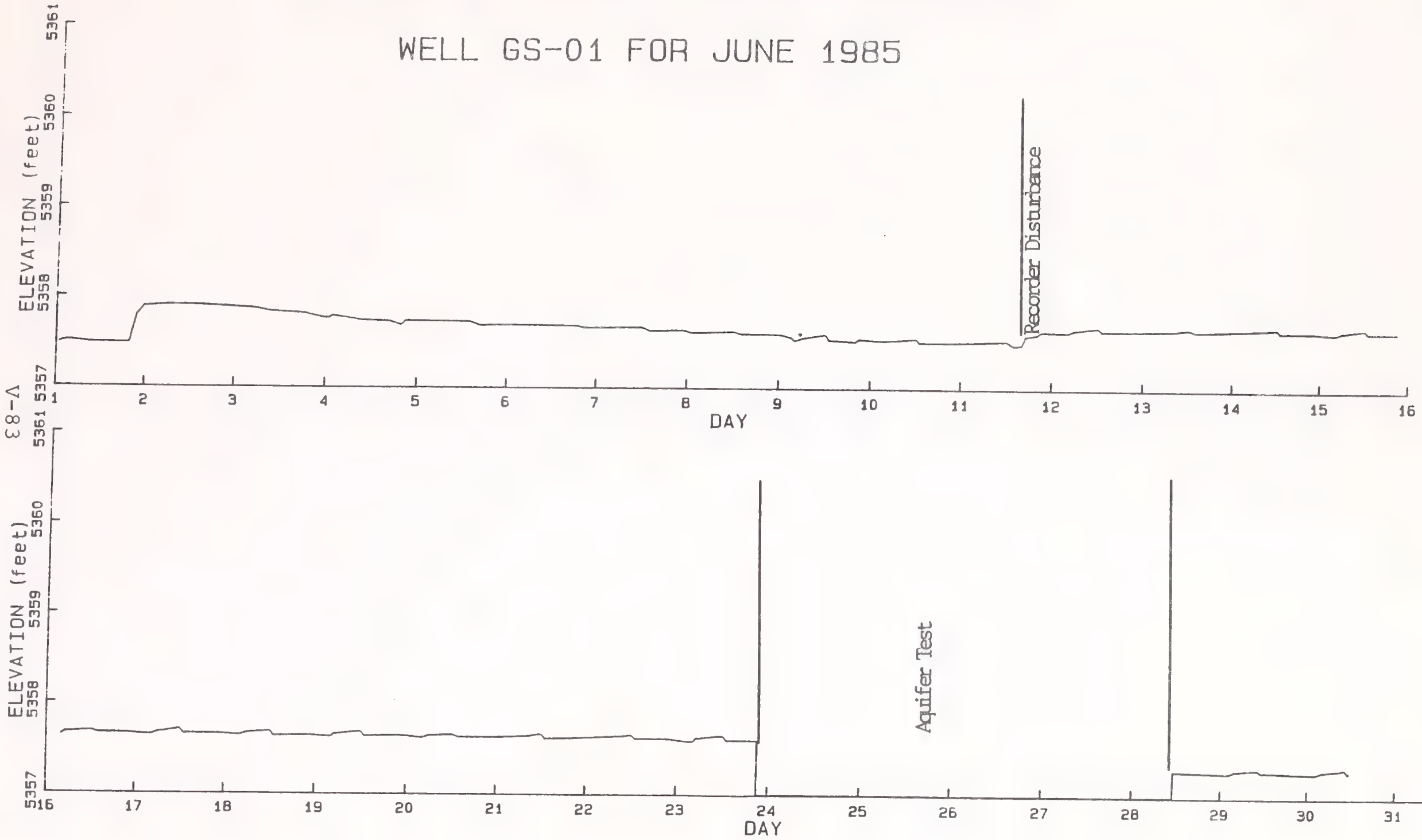


GROUND WATER ELEVATION OF MONITORING

WELL GS-01 FOR MAY 1985

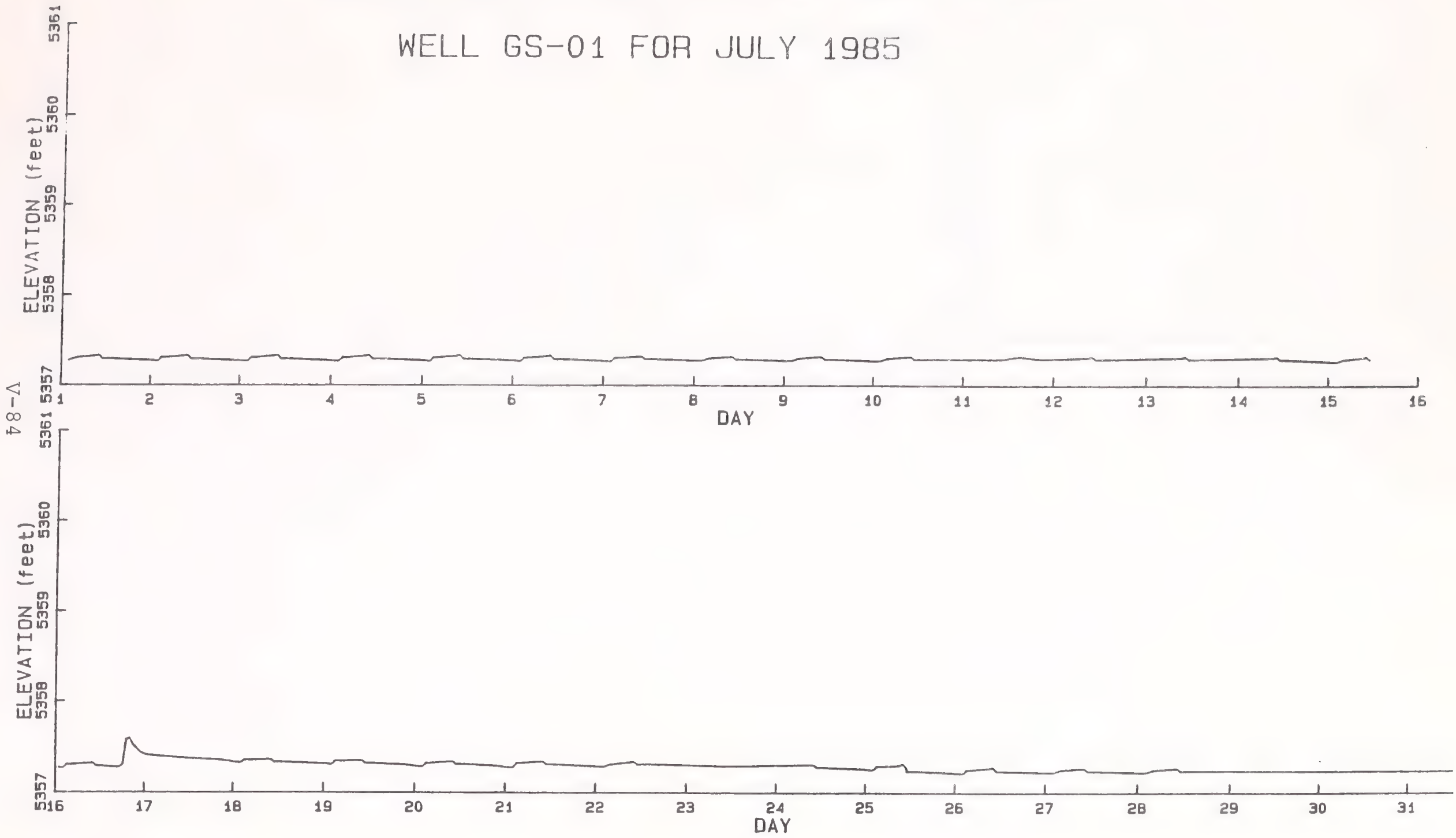


GROUND WATER ELEVATION OF MONITORING WELL GS-01 FOR JUNE 1985



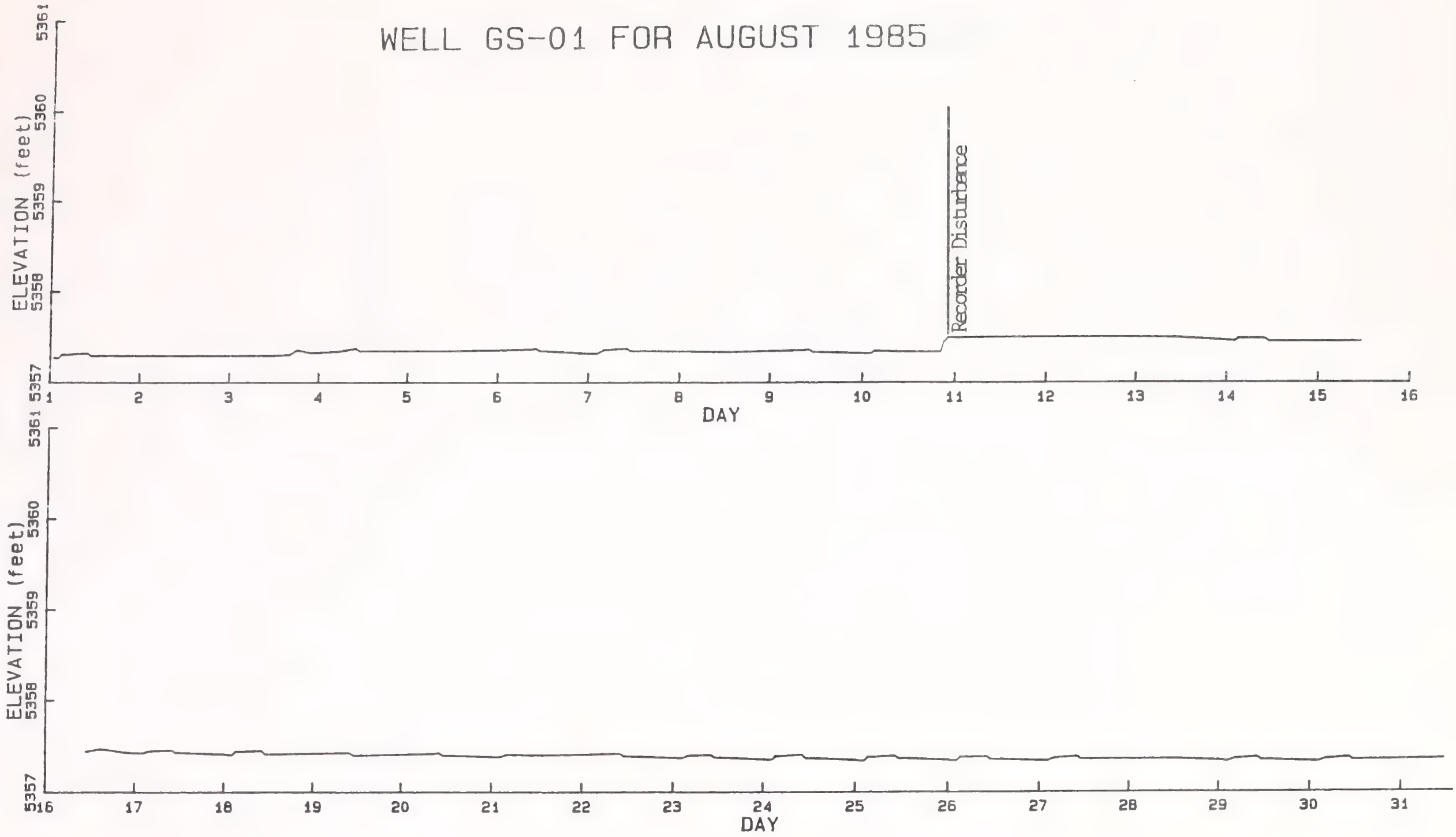
GROUND WATER ELEVATION OF MONITORING

WELL GS-01 FOR JULY 1985



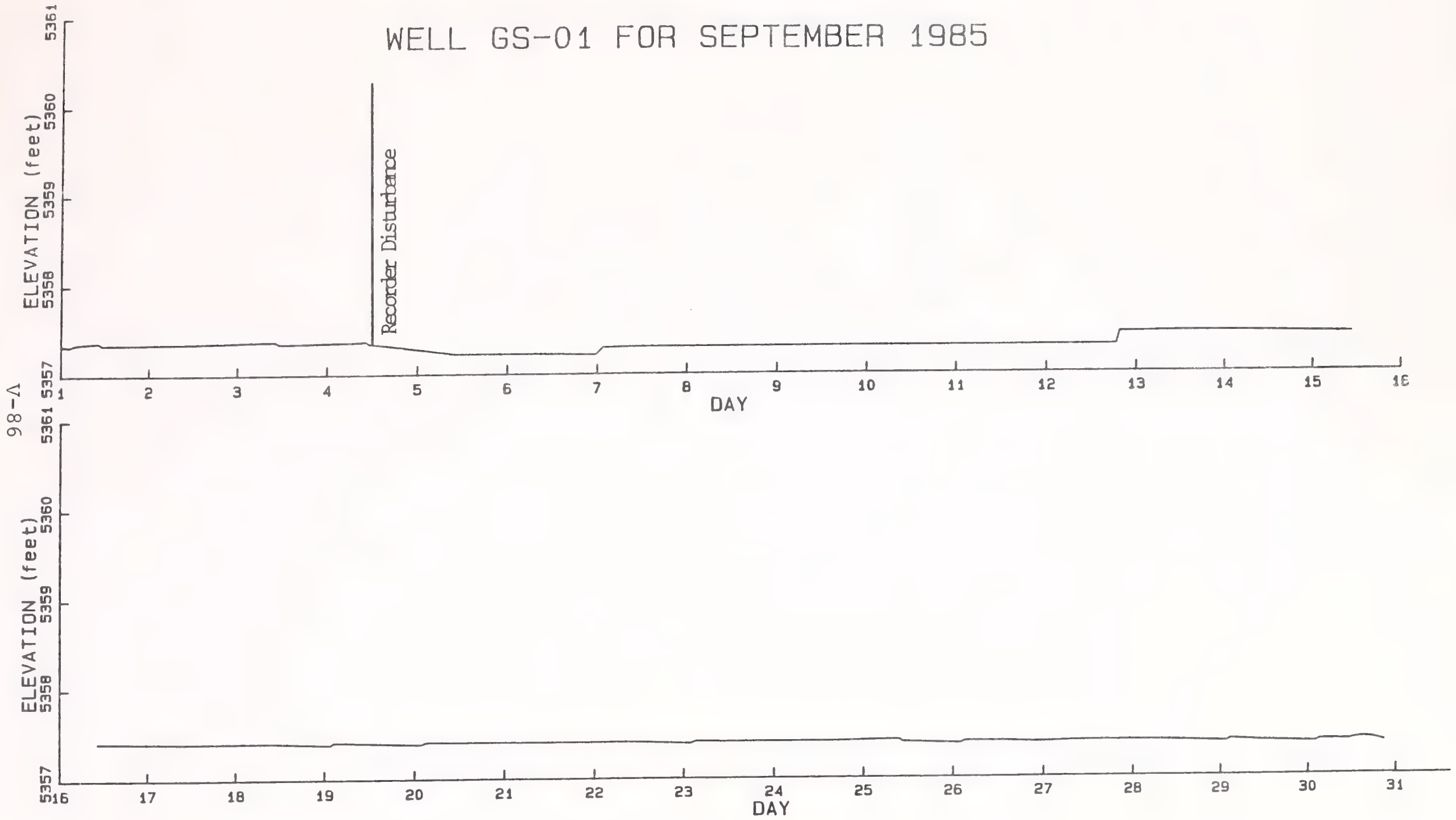
GROUND WATER ELEVATION OF MONITORING

WELL GS-01 FOR AUGUST 1985



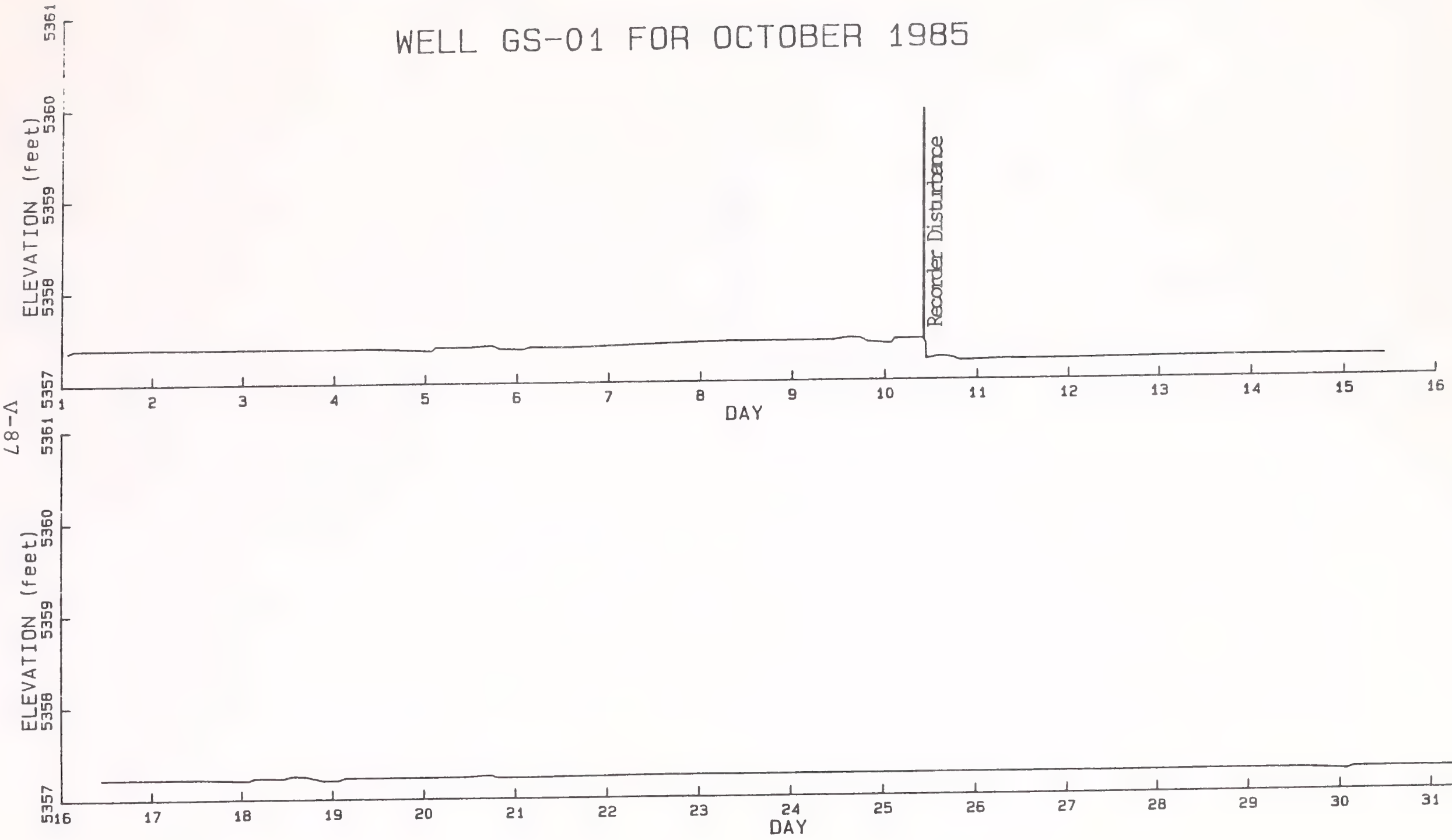
GROUND WATER ELEVATION OF MONITORING

WELL GS-01 FOR SEPTEMBER 1985



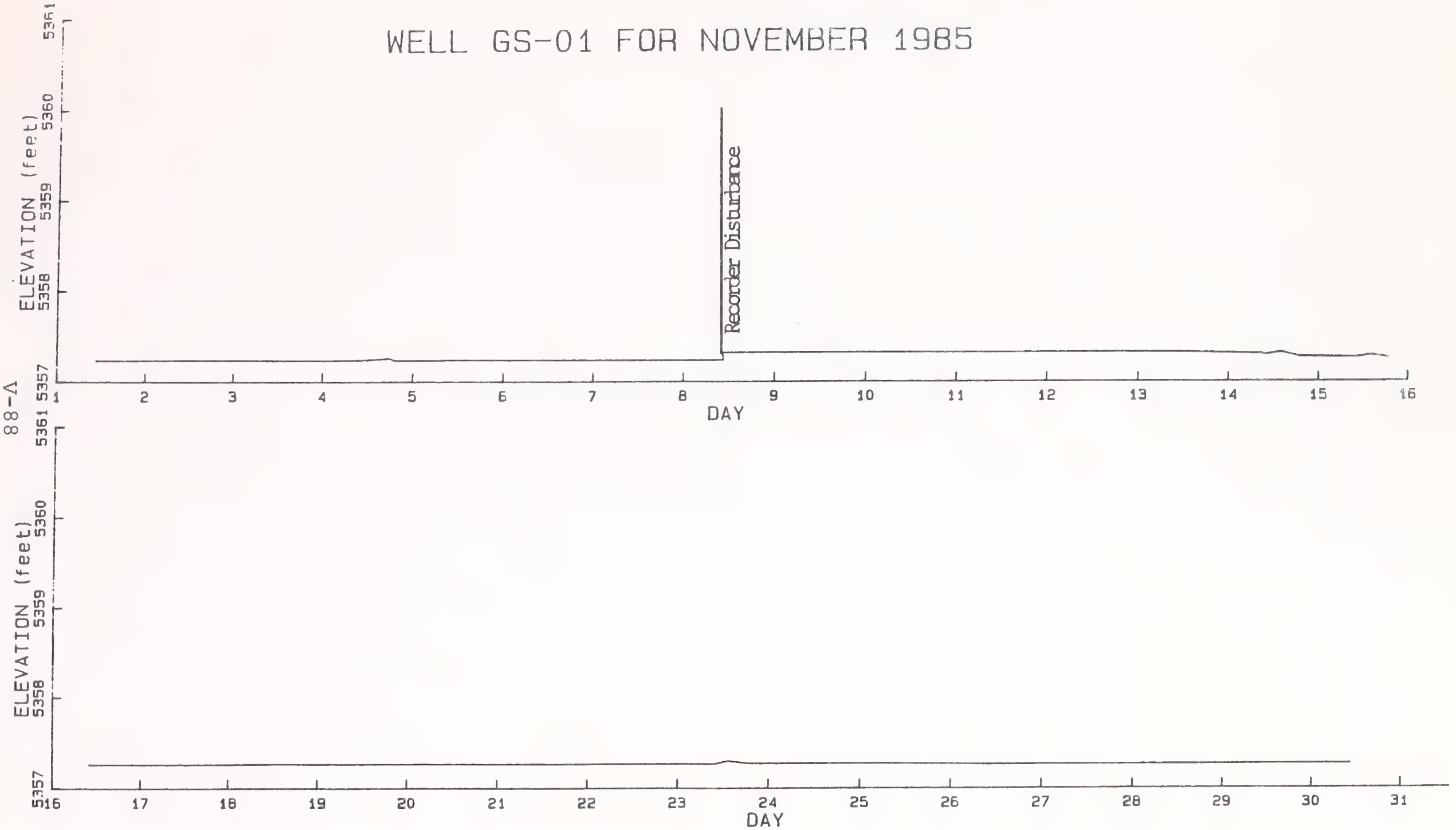
GROUND WATER ELEVATION OF MONITORING

WELL GS-01 FOR OCTOBER 1985



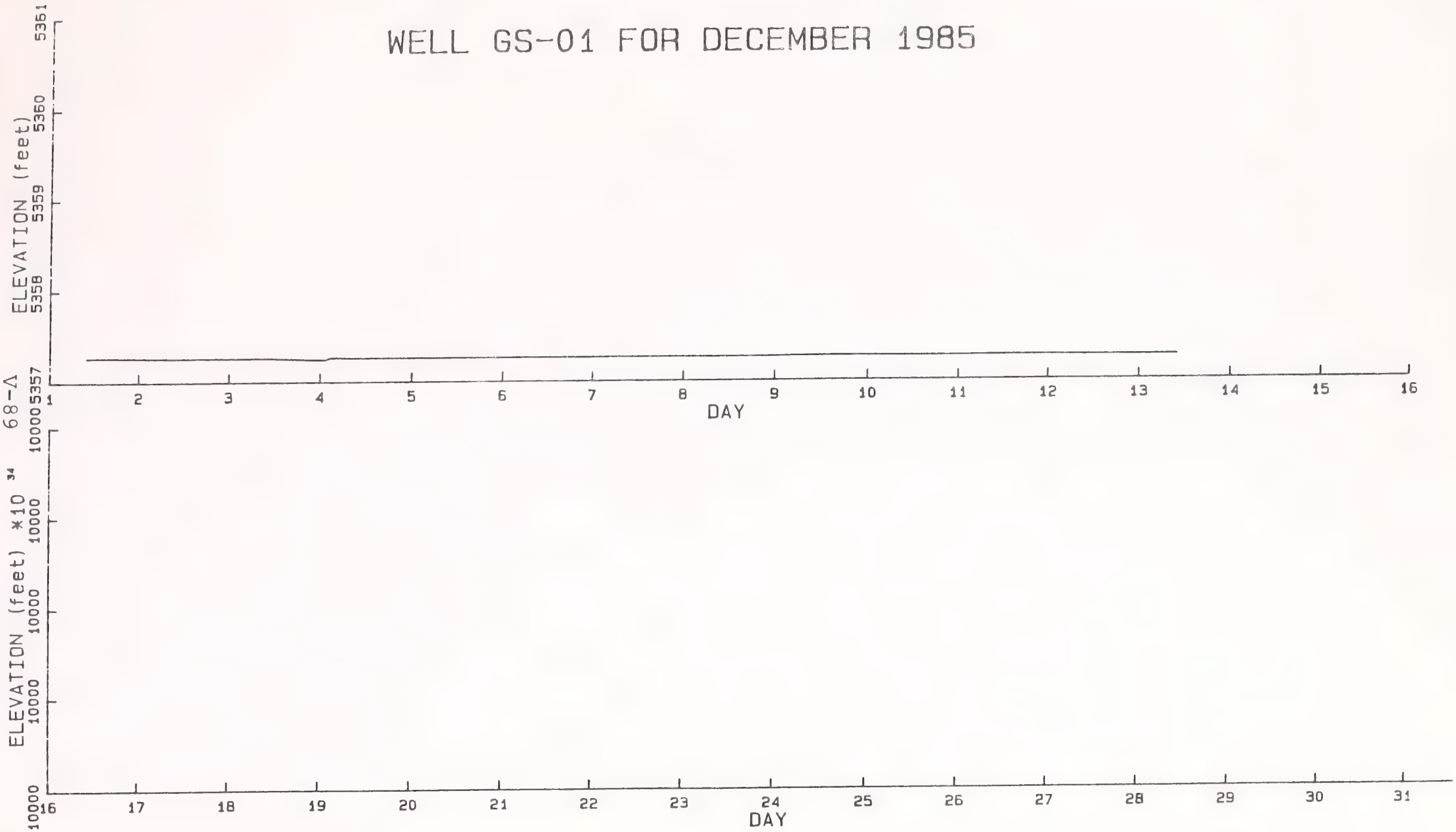
GROUND WATER ELEVATION OF MONITORING

WELL GS-01 FOR NOVEMBER 1985



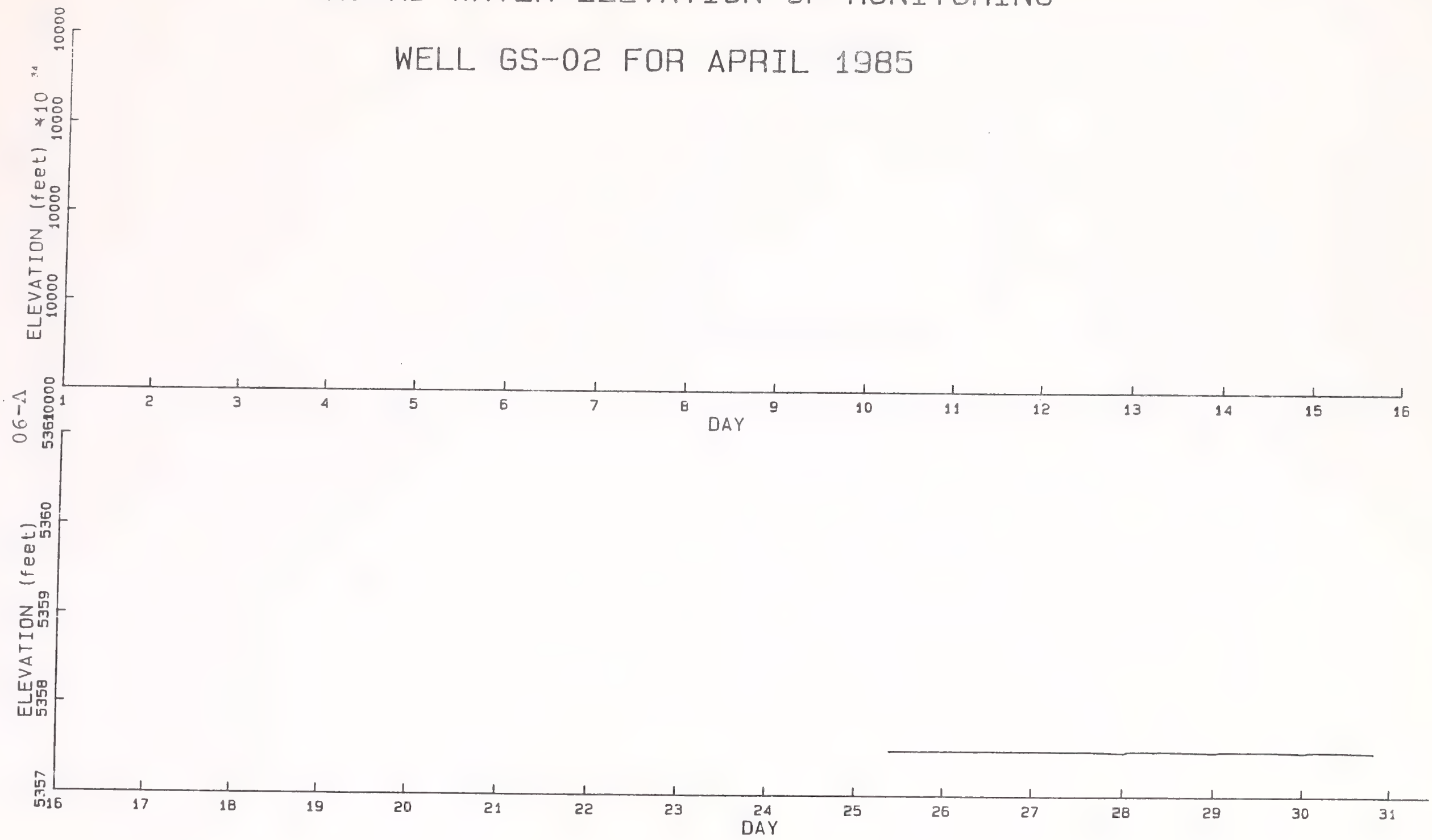
GROUND WATER ELEVATION OF MONITORING

WELL GS-01 FOR DECEMBER 1985



GROUND WATER ELEVATION OF MONITORING

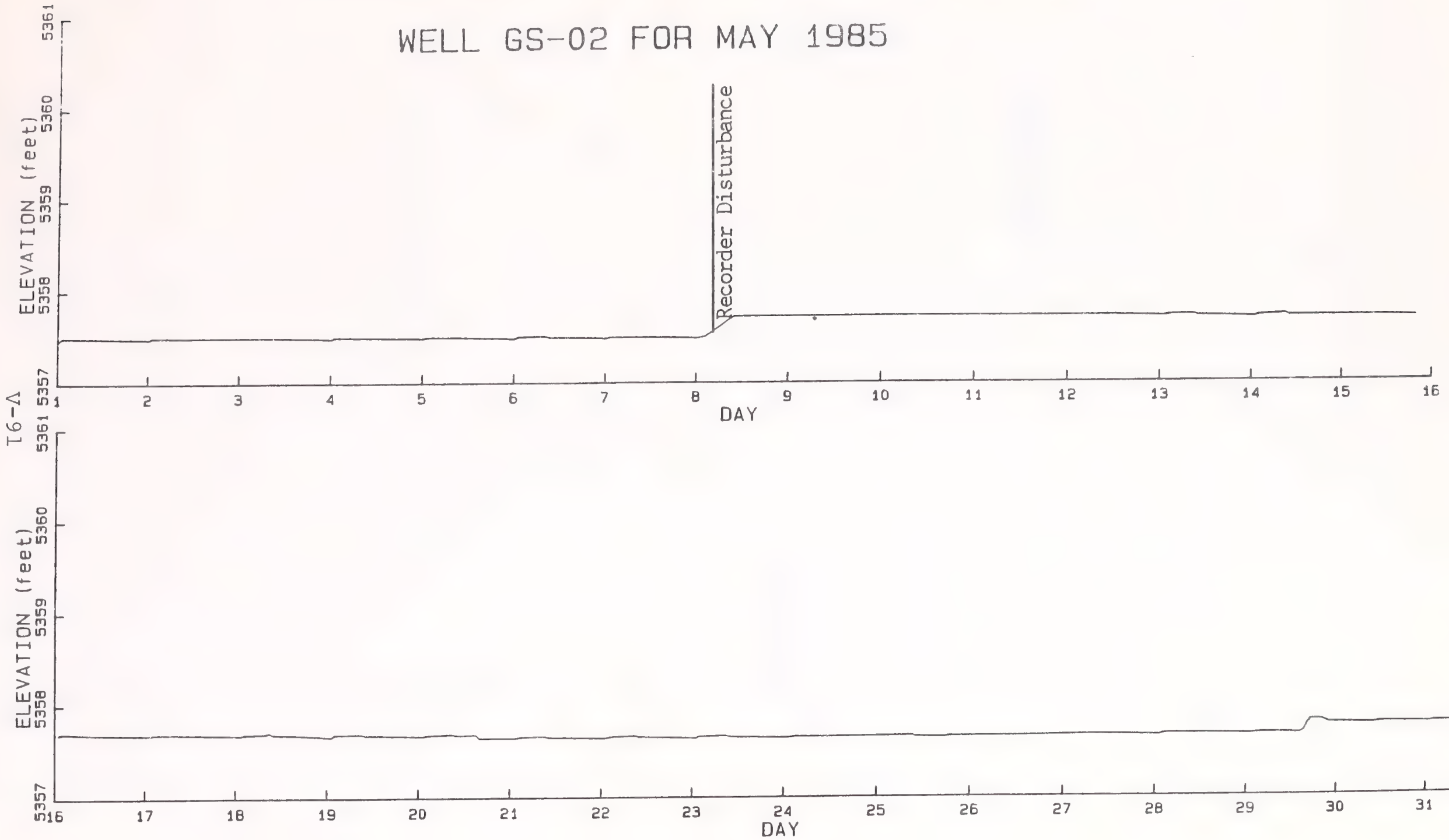
WELL GS-02 FOR APRIL 1985



06-A

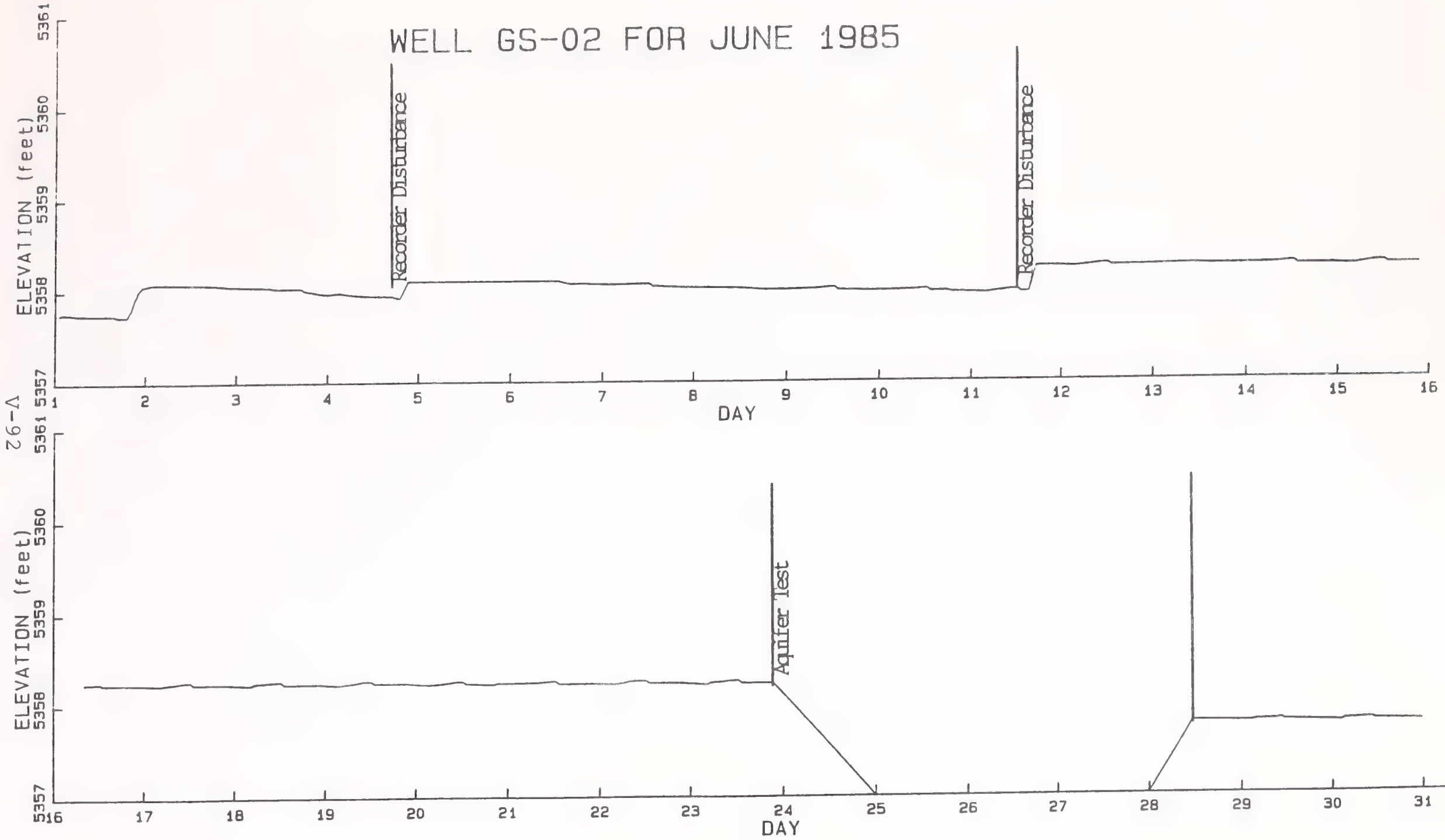
GROUND WATER ELEVATION OF MONITORING

WELL GS-02 FOR MAY 1985

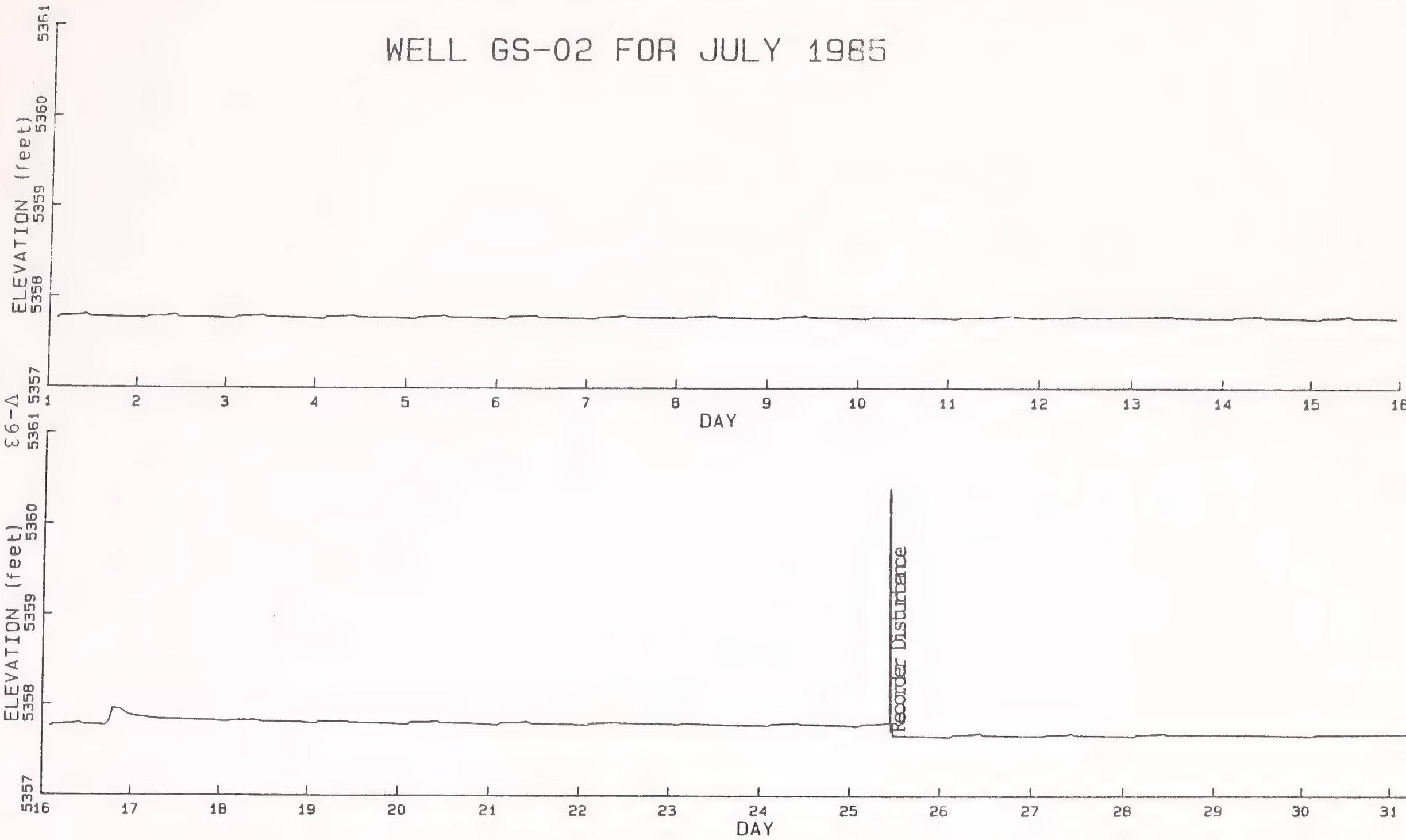


GROUND WATER ELEVATION OF MONITORING

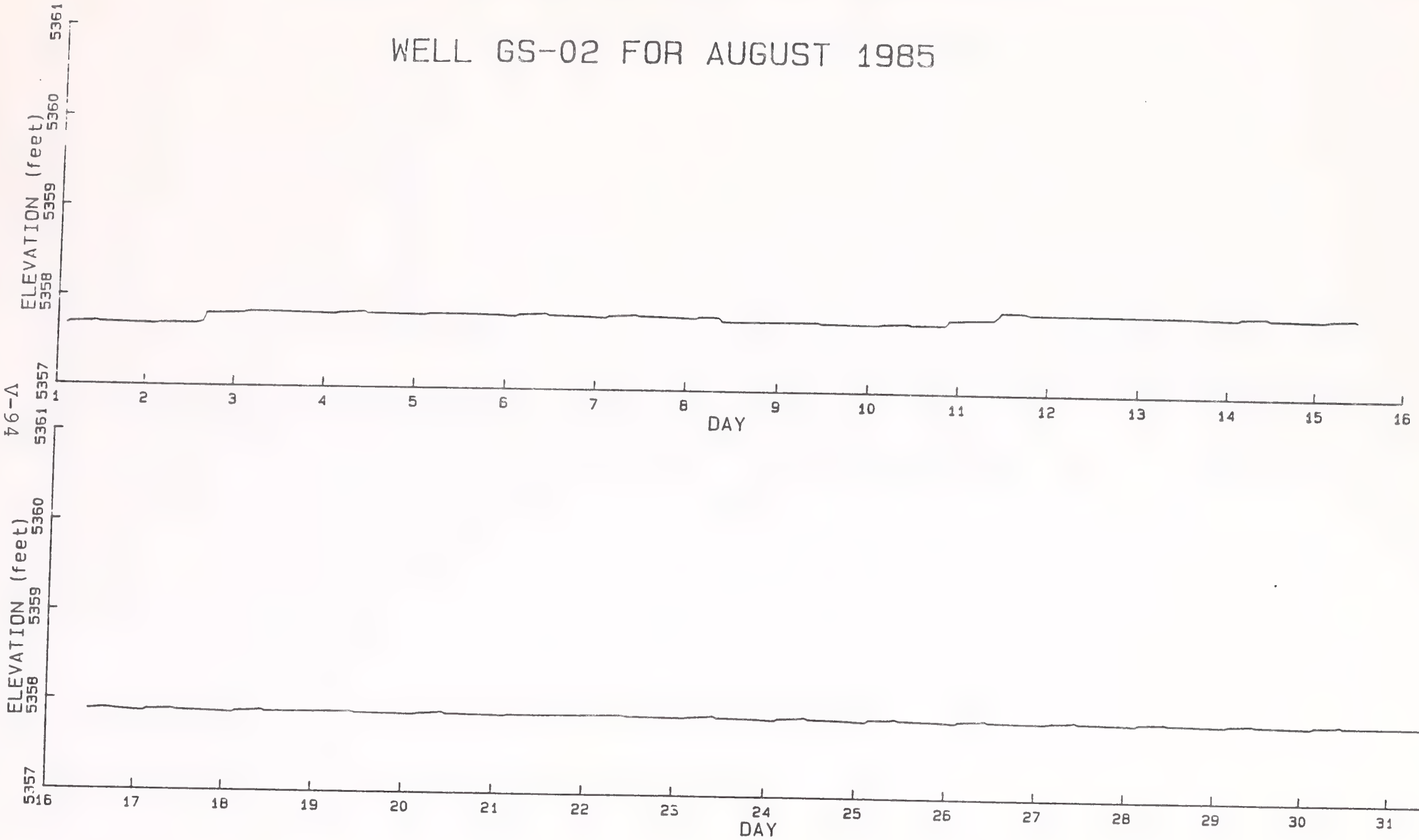
WELL GS-02 FOR JUNE 1985



GROUND WATER ELEVATION OF MONITORING WELL GS-02 FOR JULY 1985

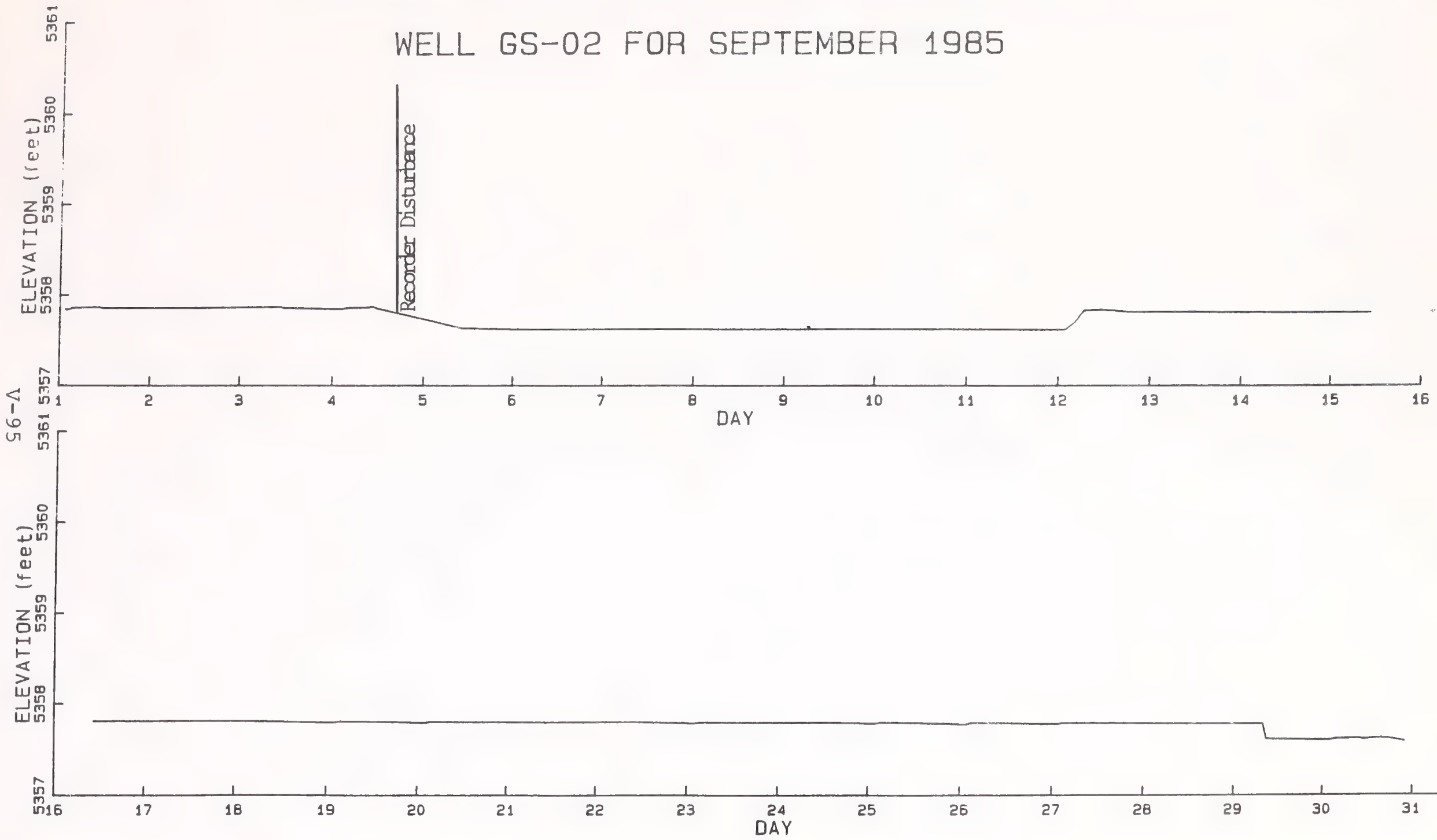


GROUND WATER ELEVATION OF MONITORING WELL GS-02 FOR AUGUST 1985



GROUND WATER ELEVATION OF MONITORING

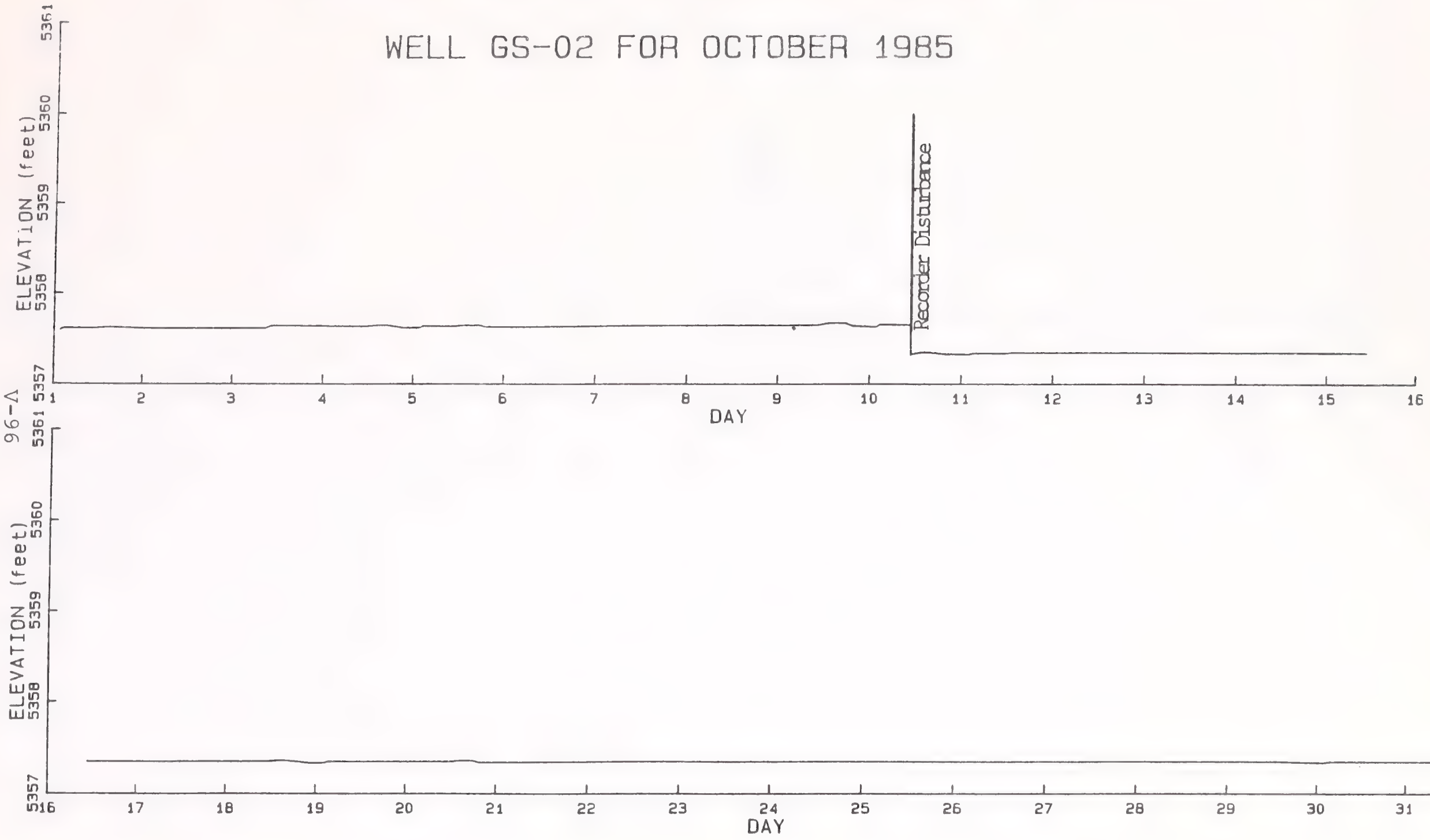
WELL GS-02 FOR SEPTEMBER 1985



V-95

GROUND WATER ELEVATION OF MONITORING

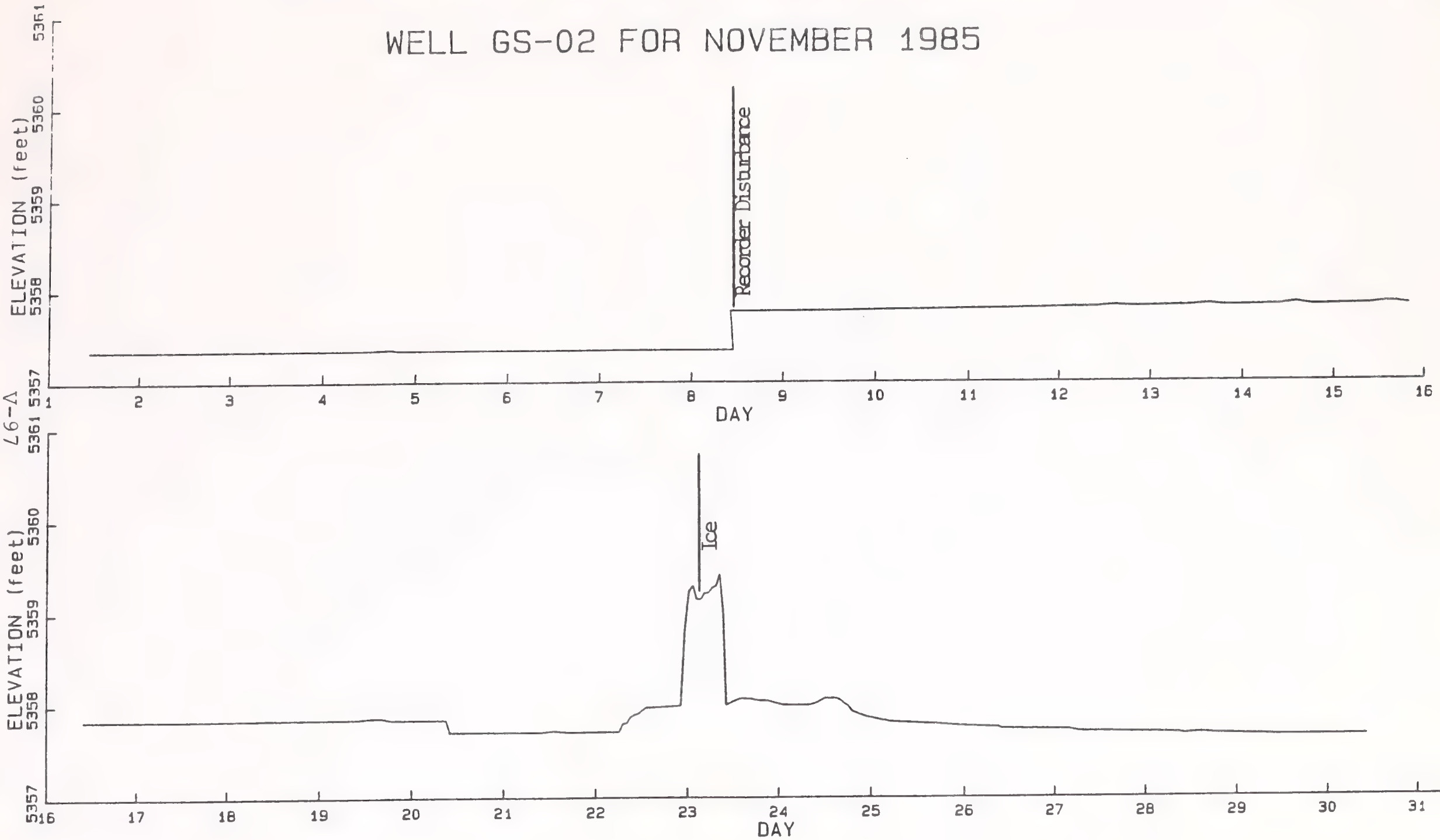
WELL GS-02 FOR OCTOBER 1985



96-A

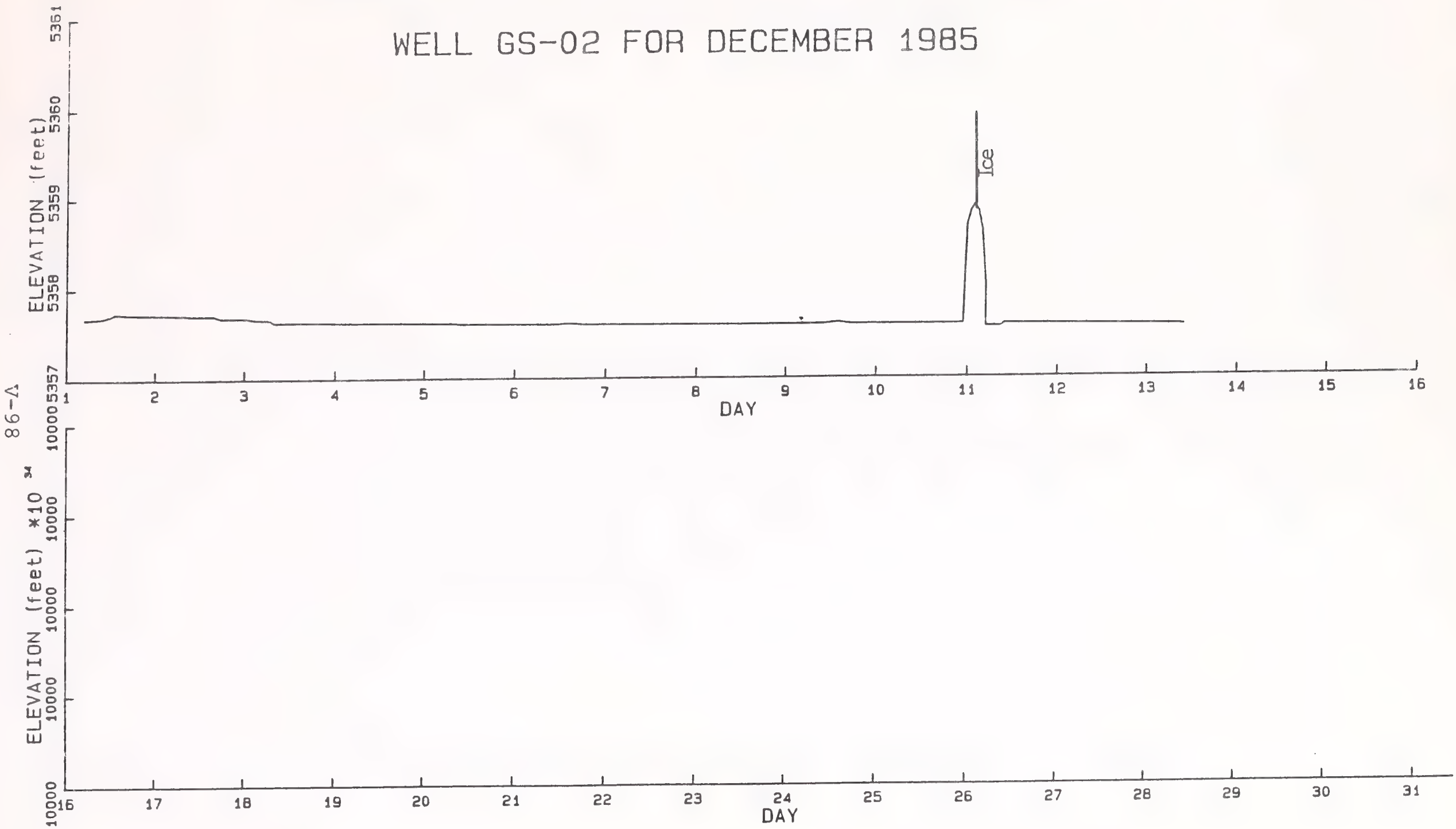
GROUND WATER ELEVATION OF MONITORING

WELL GS-02 FOR NOVEMBER 1985



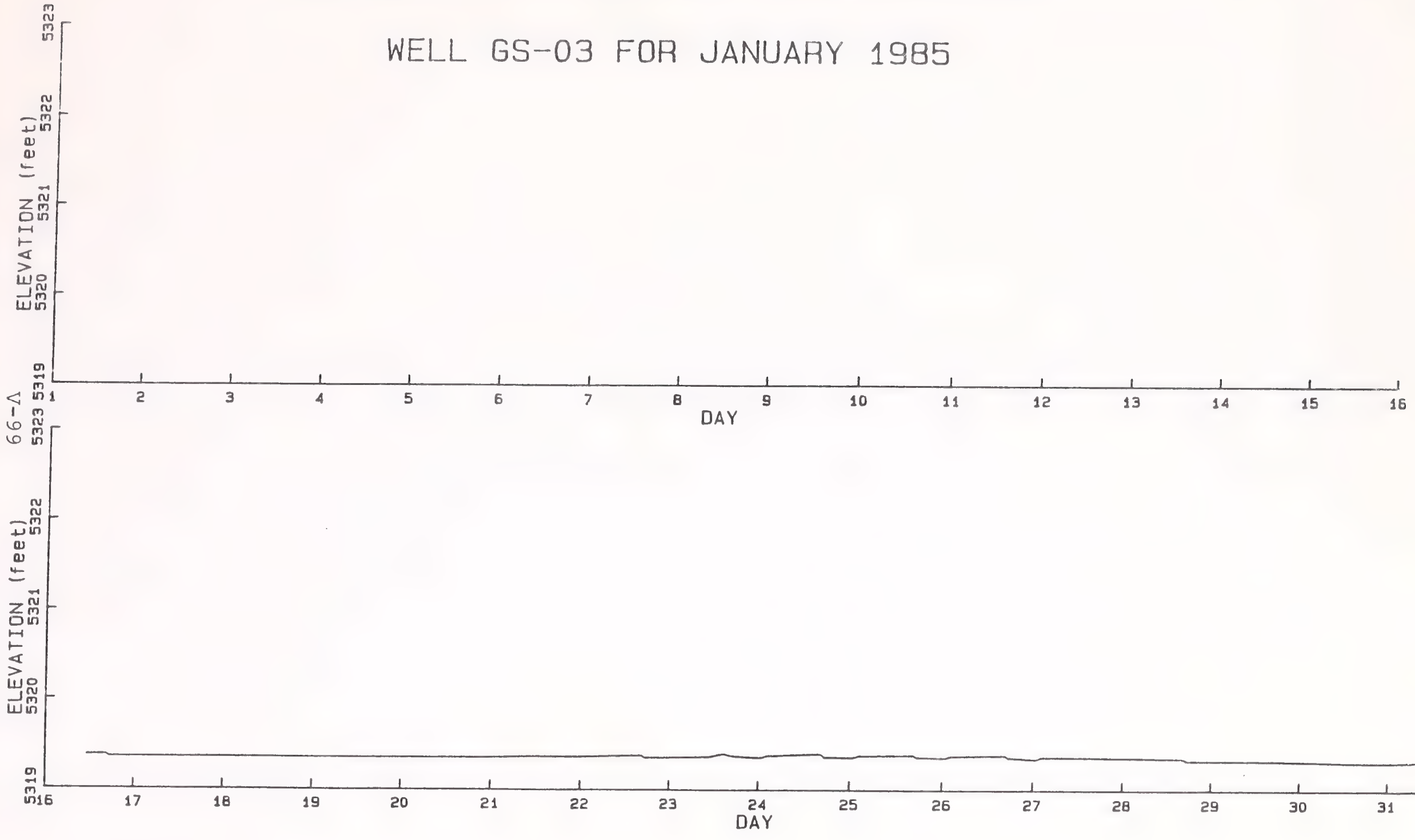
GROUND WATER ELEVATION OF MONITORING

WELL GS-02 FOR DECEMBER 1985



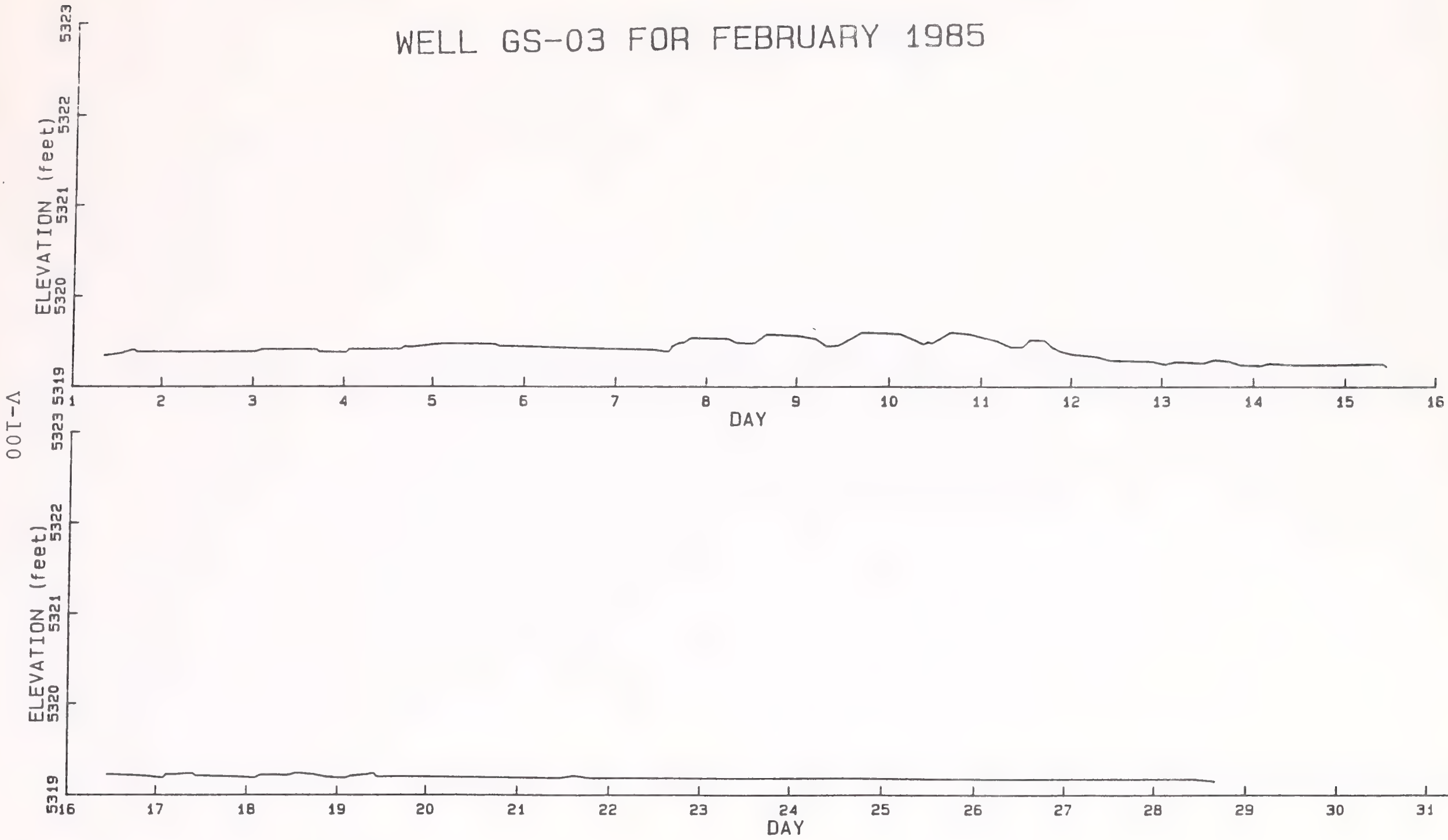
GROUND WATER ELEVATION OF MONITORING

WELL GS-03 FOR JANUARY 1985



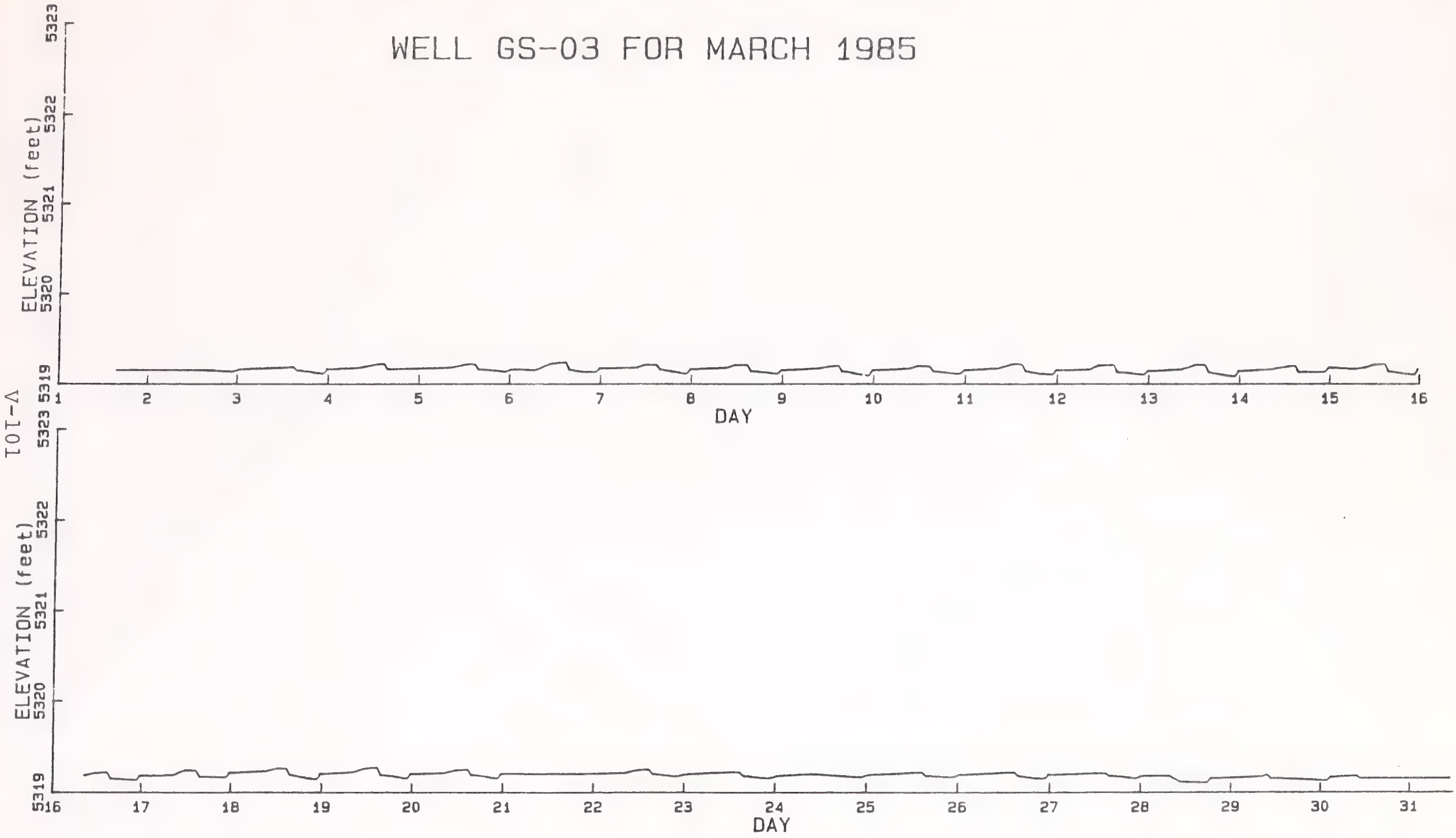
GROUND WATER ELEVATION OF MONITORING

WELL GS-03 FOR FEBRUARY 1985



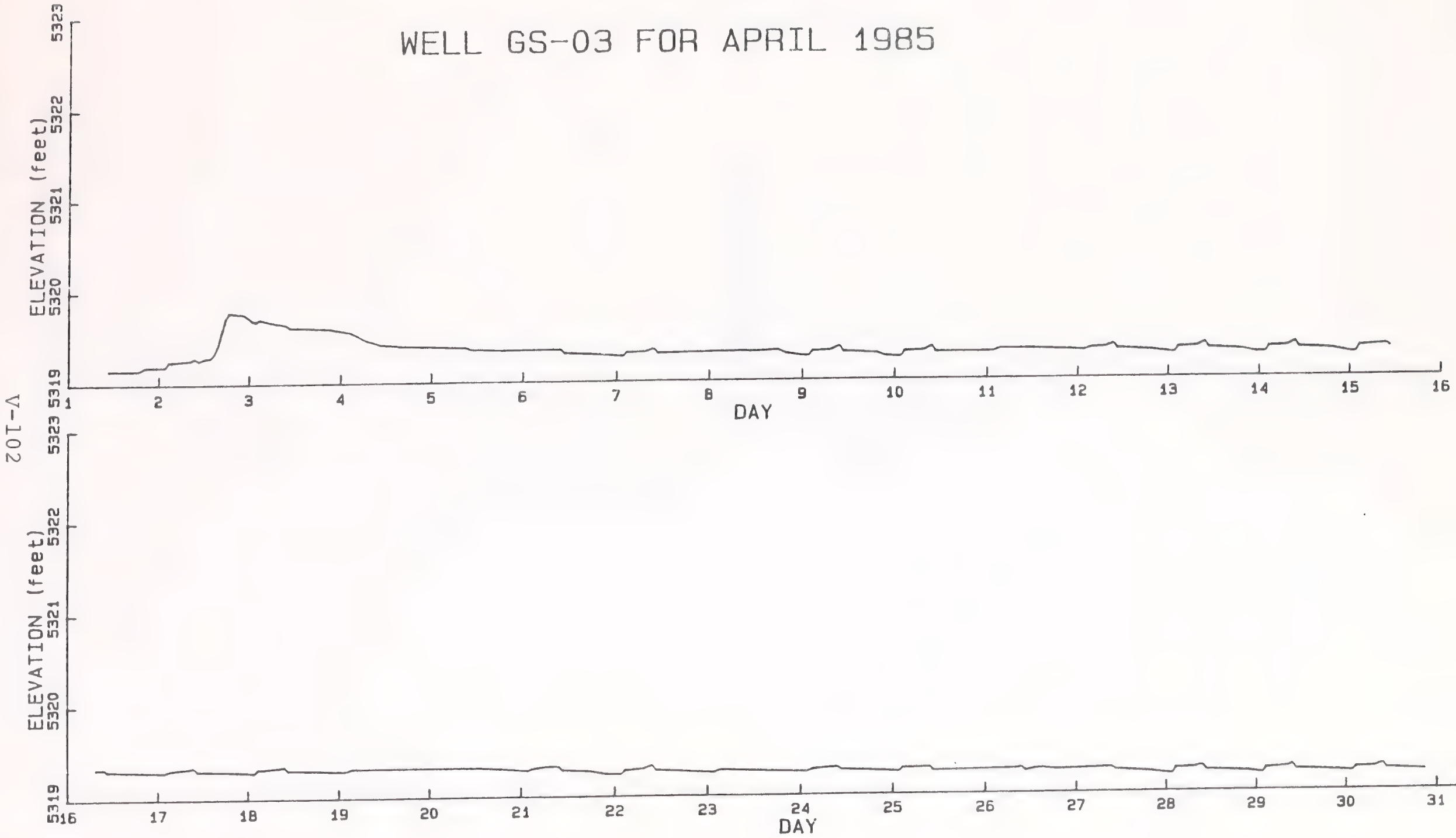
GROUND WATER ELEVATION OF MONITORING

WELL GS-03 FOR MARCH 1985



GROUND WATER ELEVATION OF MONITORING

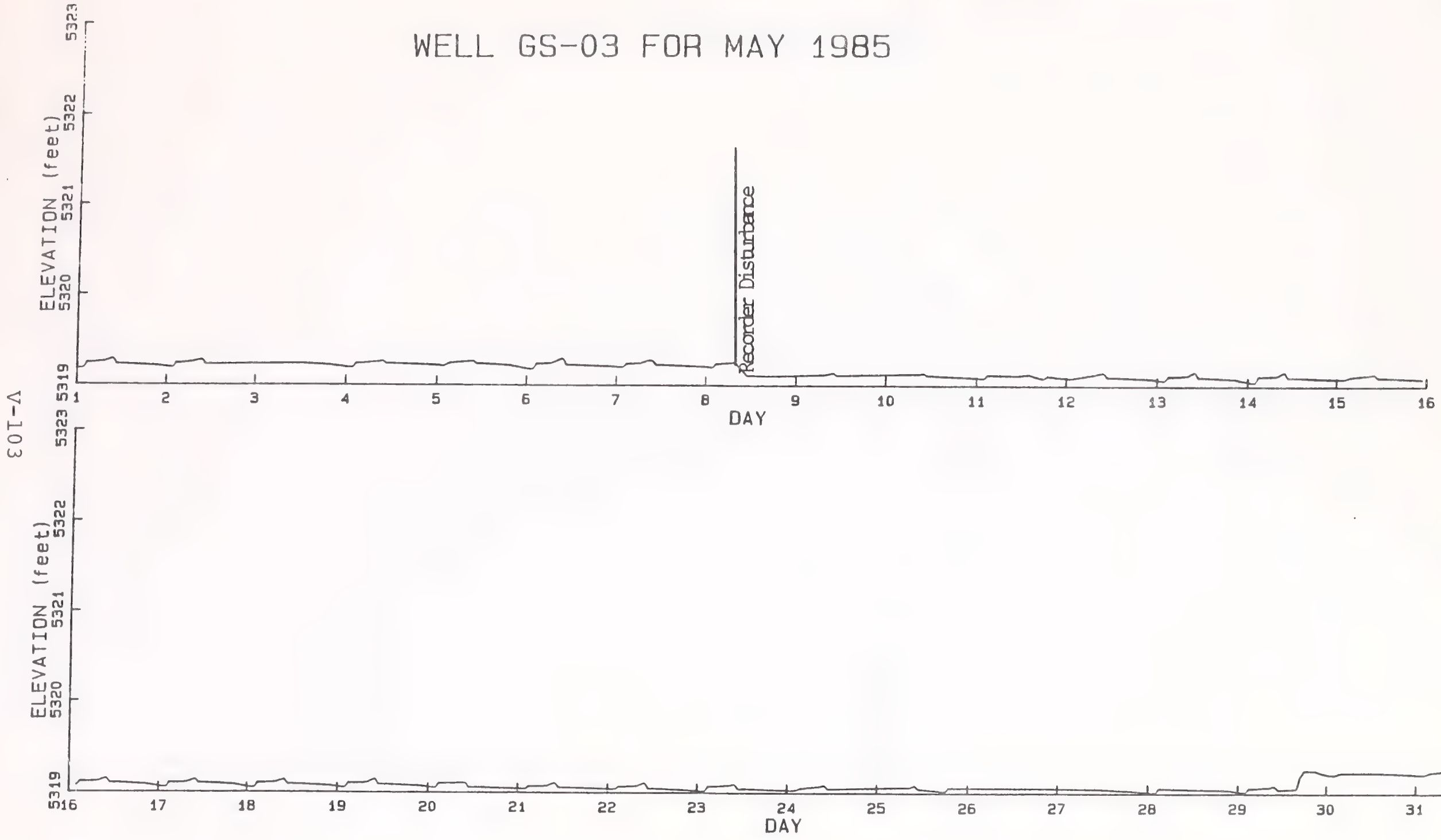
WELL GS-03 FOR APRIL 1985



V-102

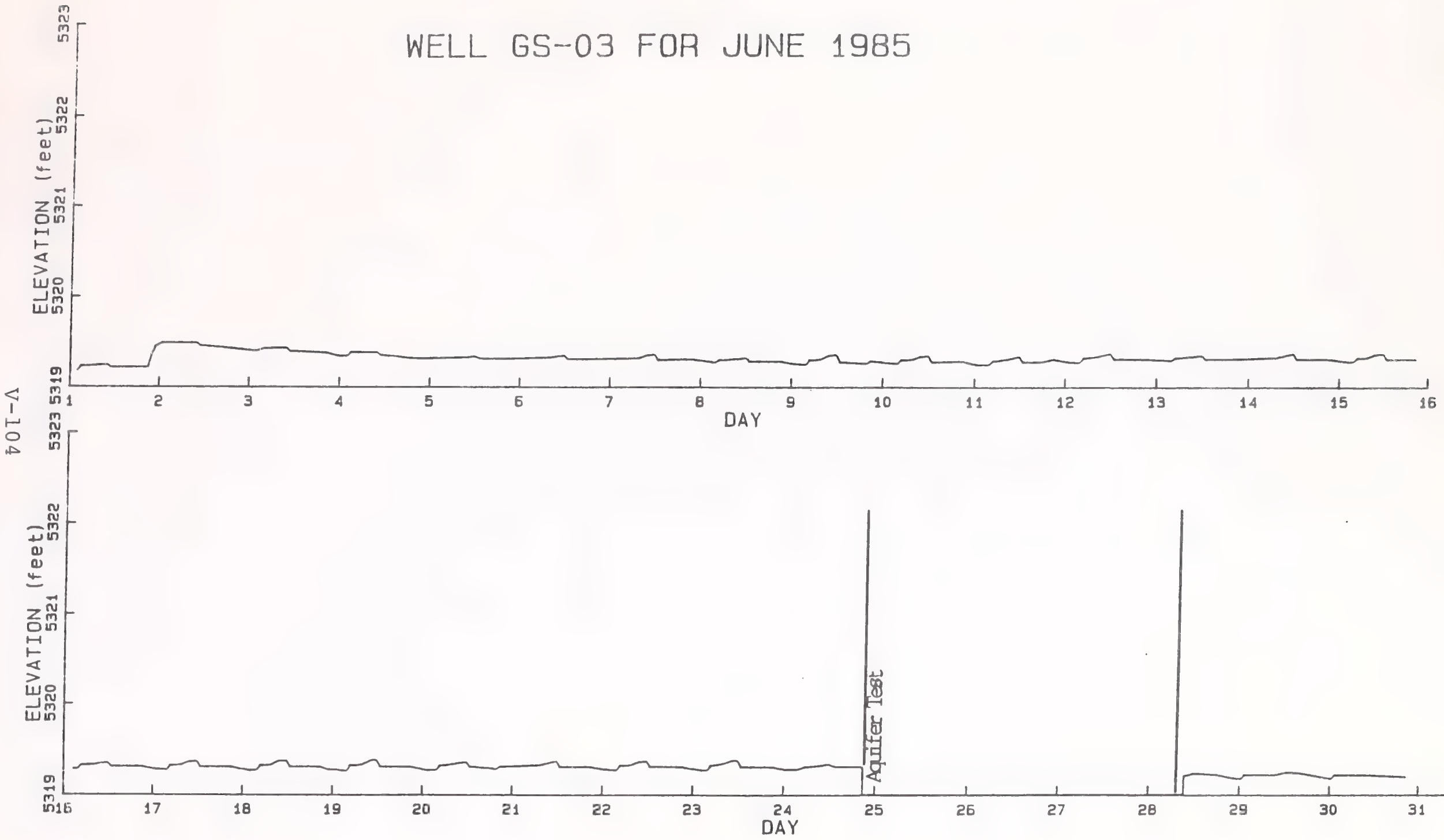
GROUND WATER ELEVATION OF MONITORING

WELL GS-03 FOR MAY 1985



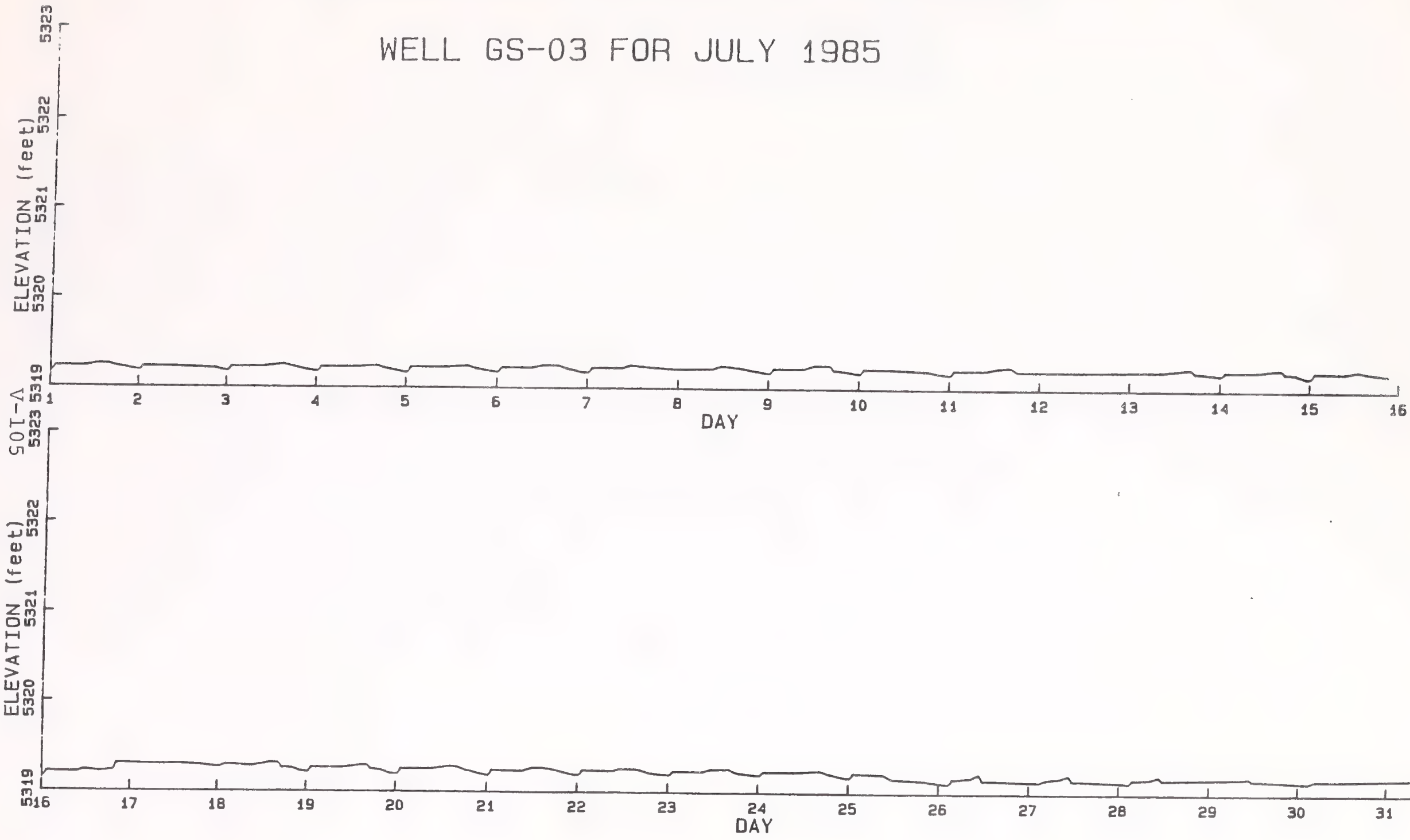
GROUND WATER ELEVATION OF MONITORING

WELL GS-03 FOR JUNE 1985



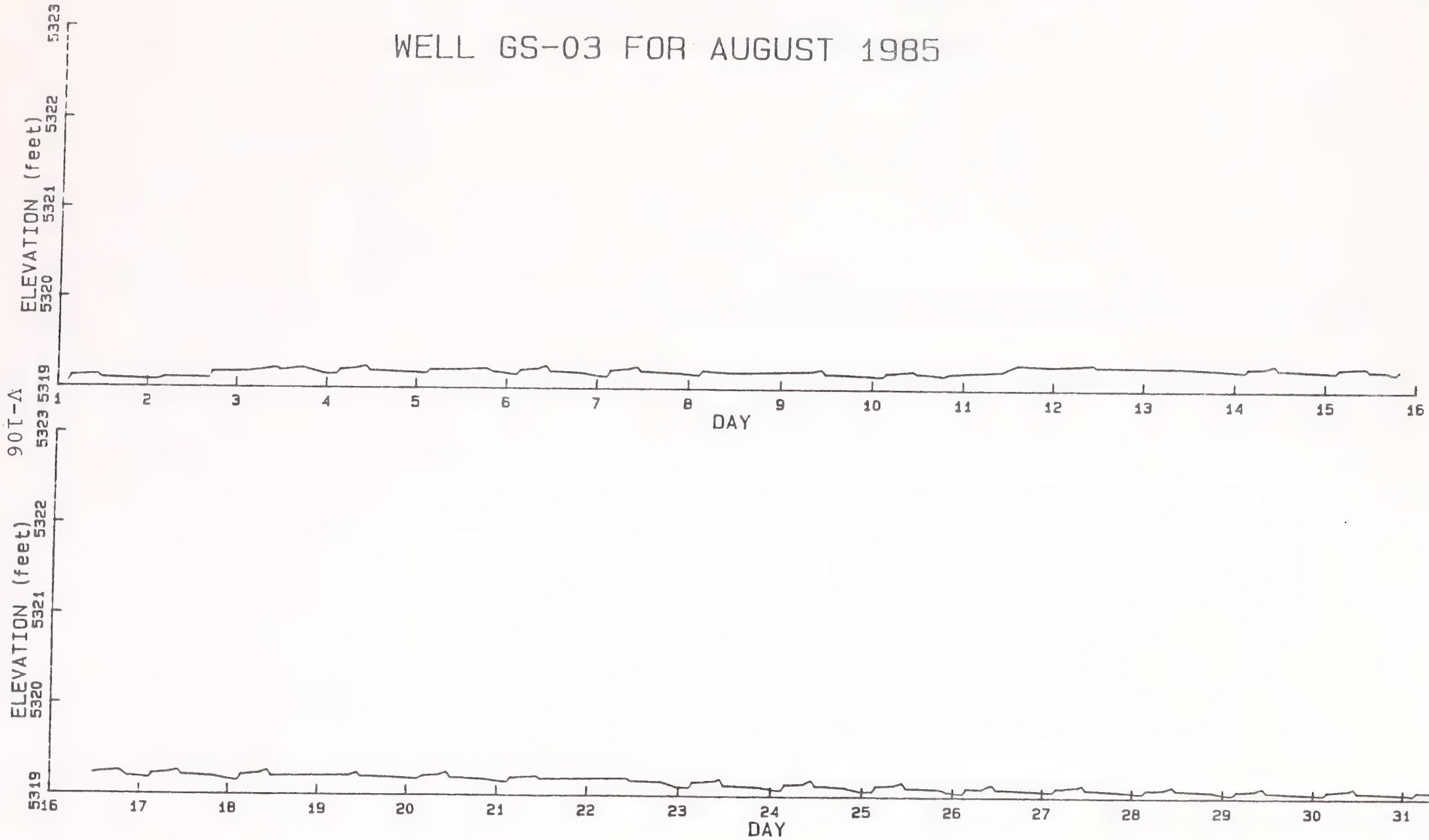
GROUND WATER ELEVATION OF MONITORING

WELL GS-03 FOR JULY 1985



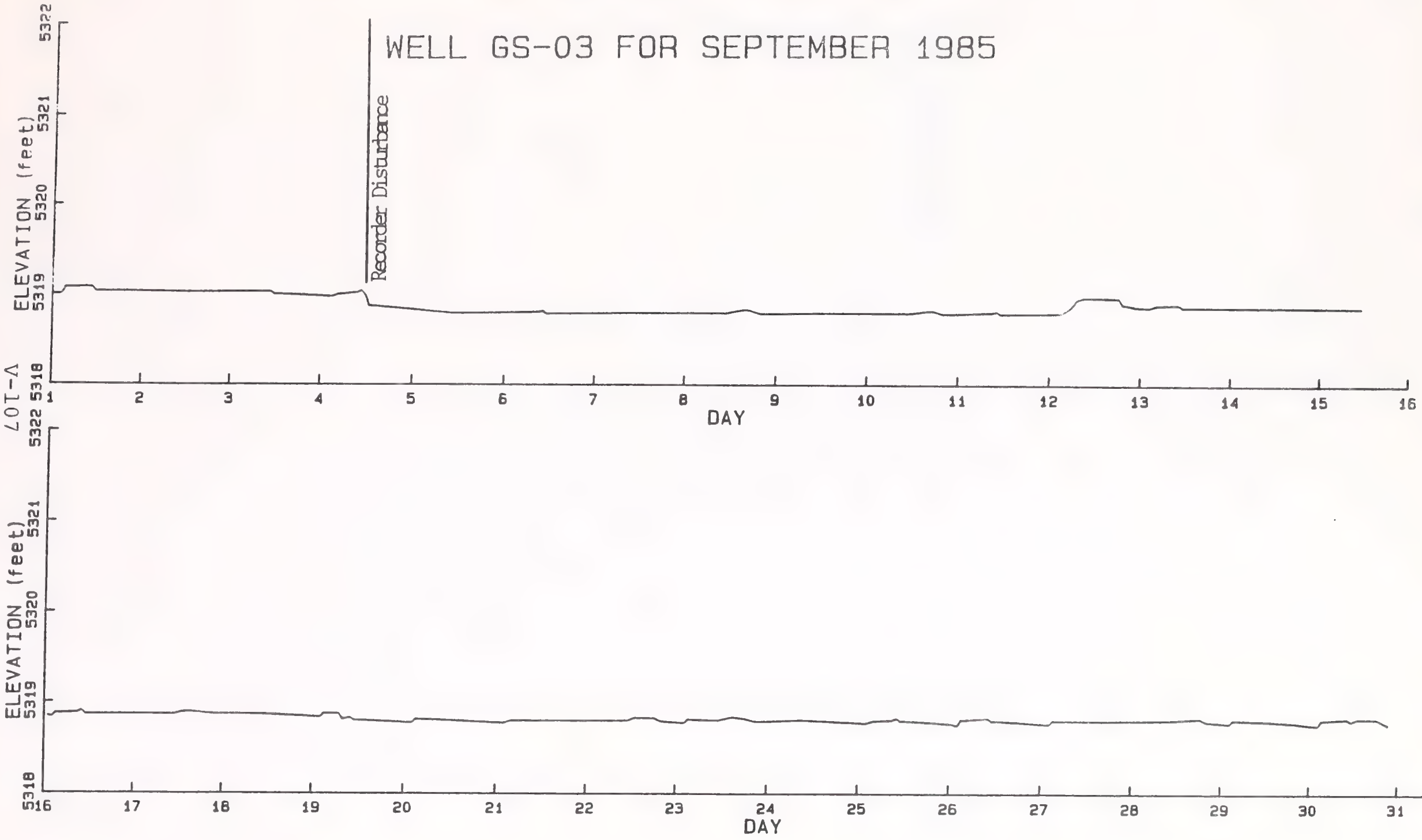
GROUND WATER ELEVATION OF MONITORING

WELL GS-03 FOR AUGUST 1985



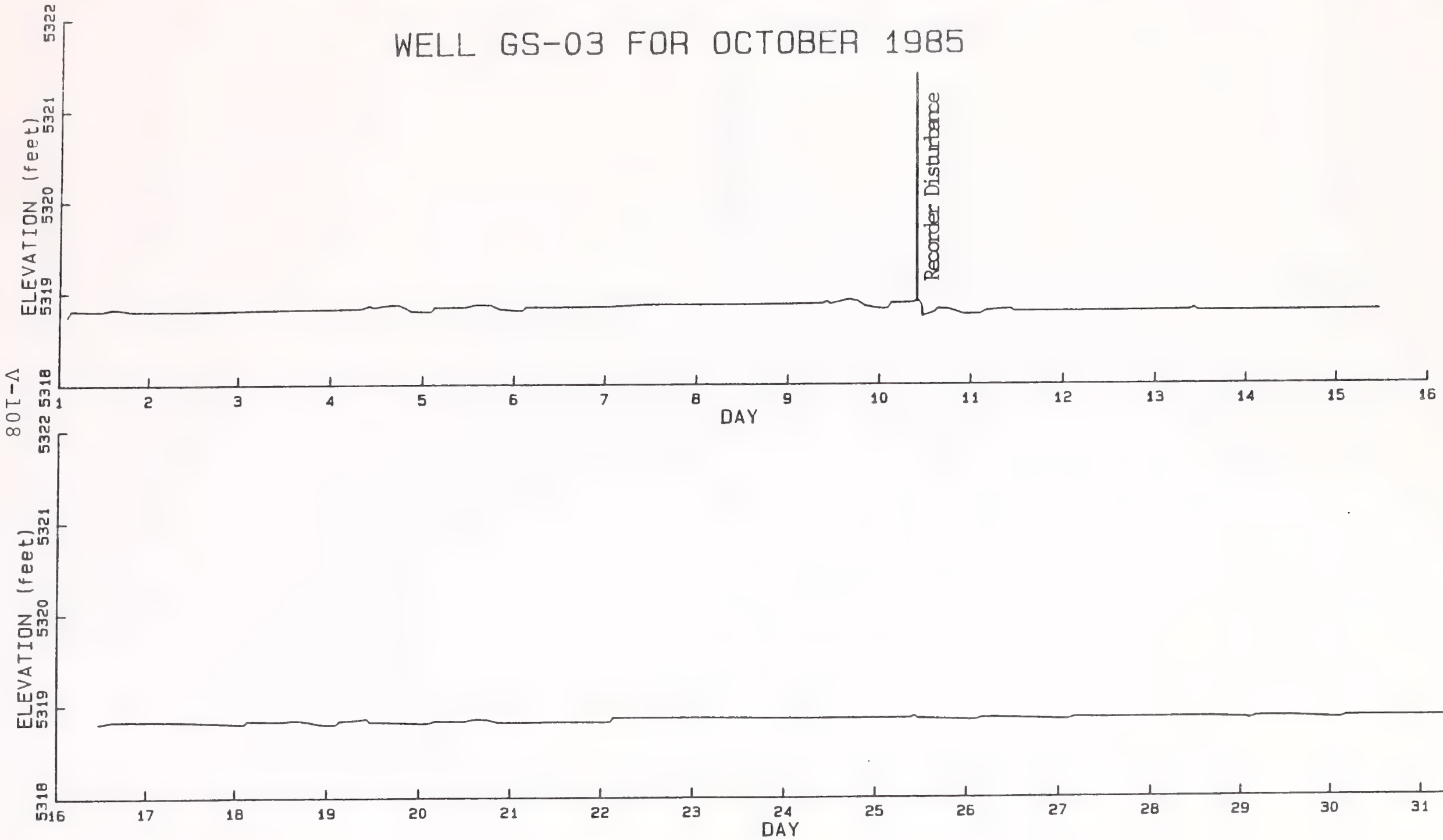
GROUND WATER ELEVATION OF MONITORING

WELL GS-03 FOR SEPTEMBER 1985



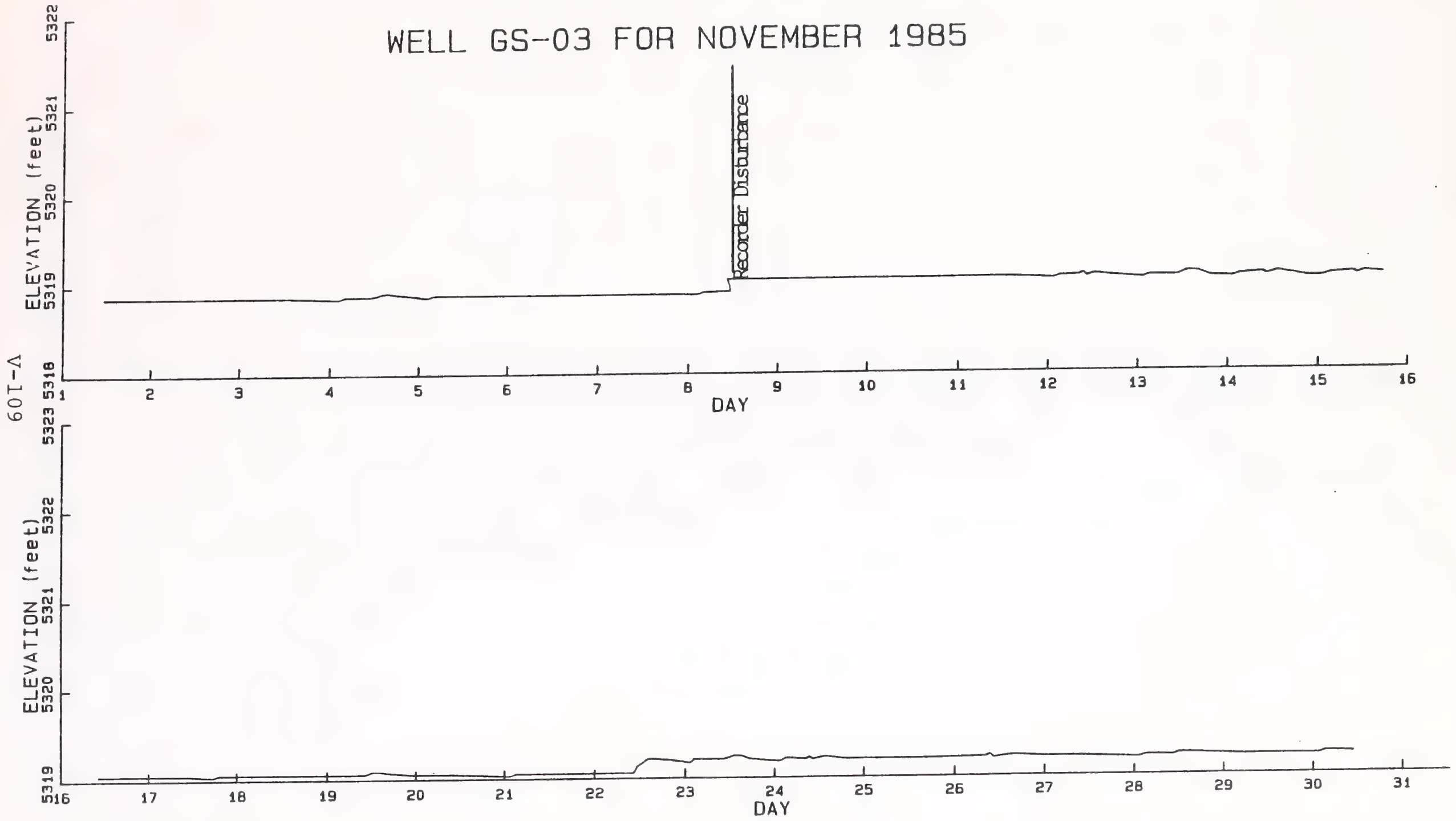
GROUND WATER ELEVATION OF MONITORING

WELL GS-03 FOR OCTOBER 1985



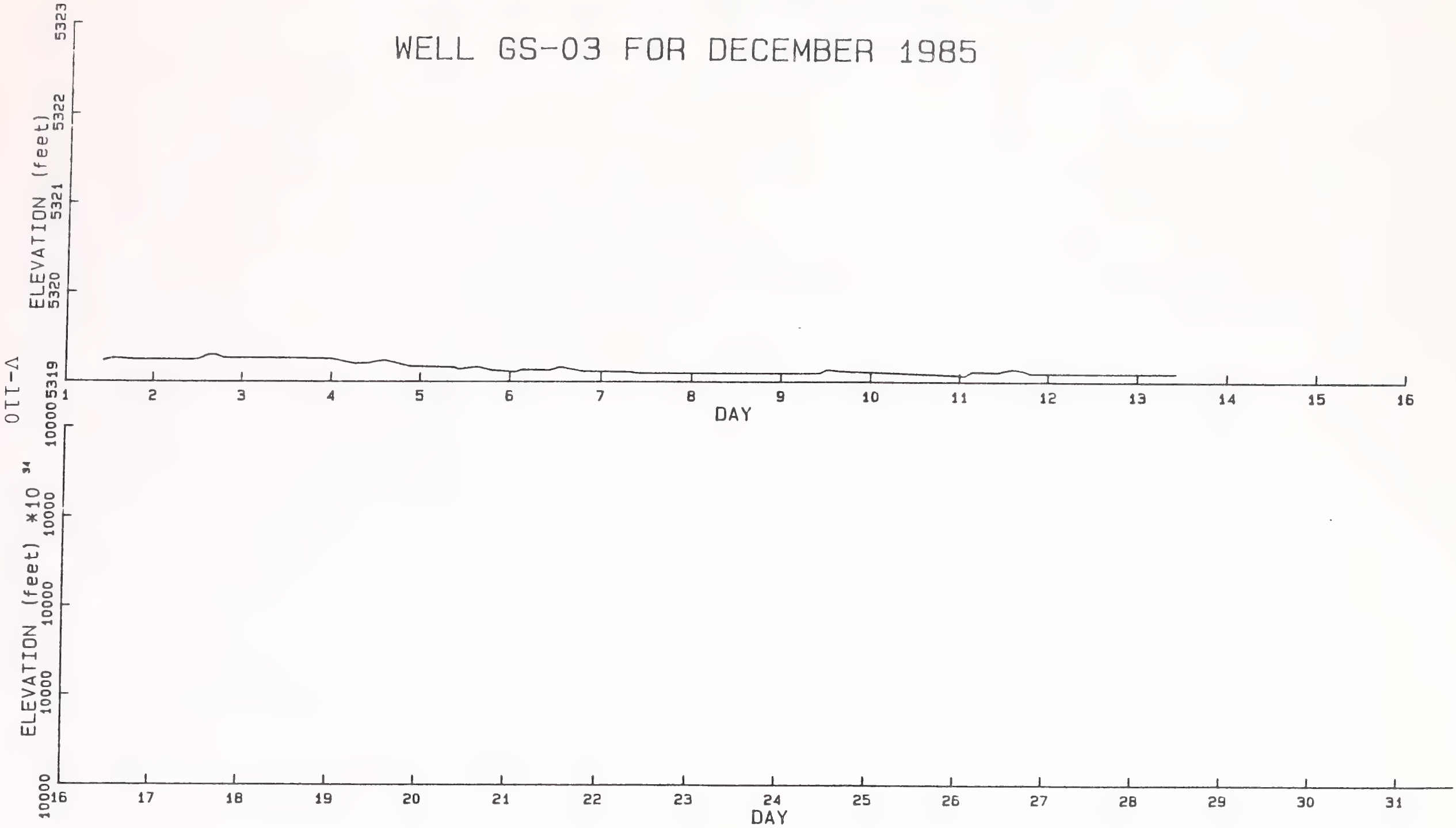
GROUND WATER ELEVATION OF MONITORING

WELL GS-03 FOR NOVEMBER 1985



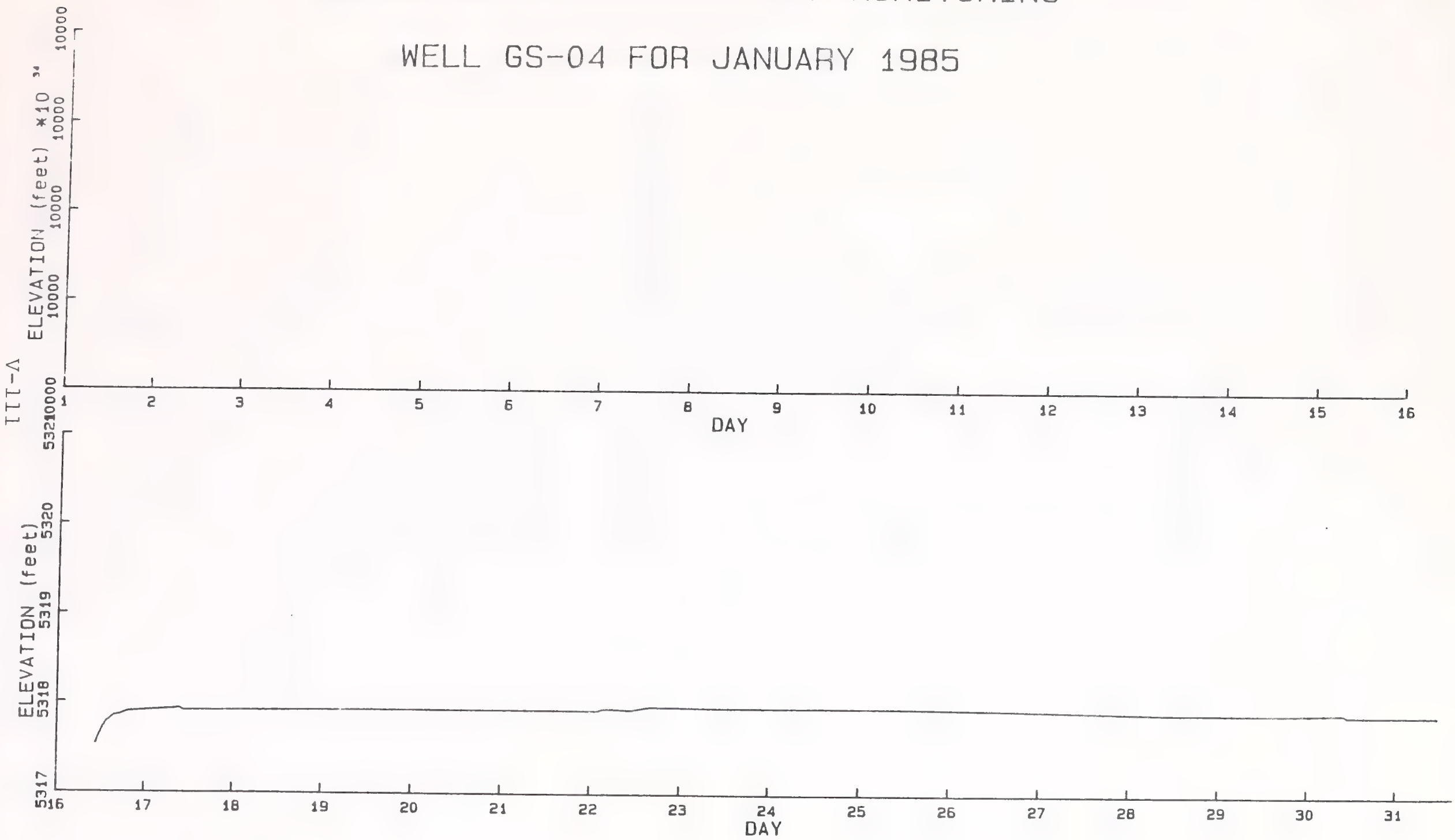
GROUND WATER ELEVATION OF MONITORING

WELL GS-03 FOR DECEMBER 1985



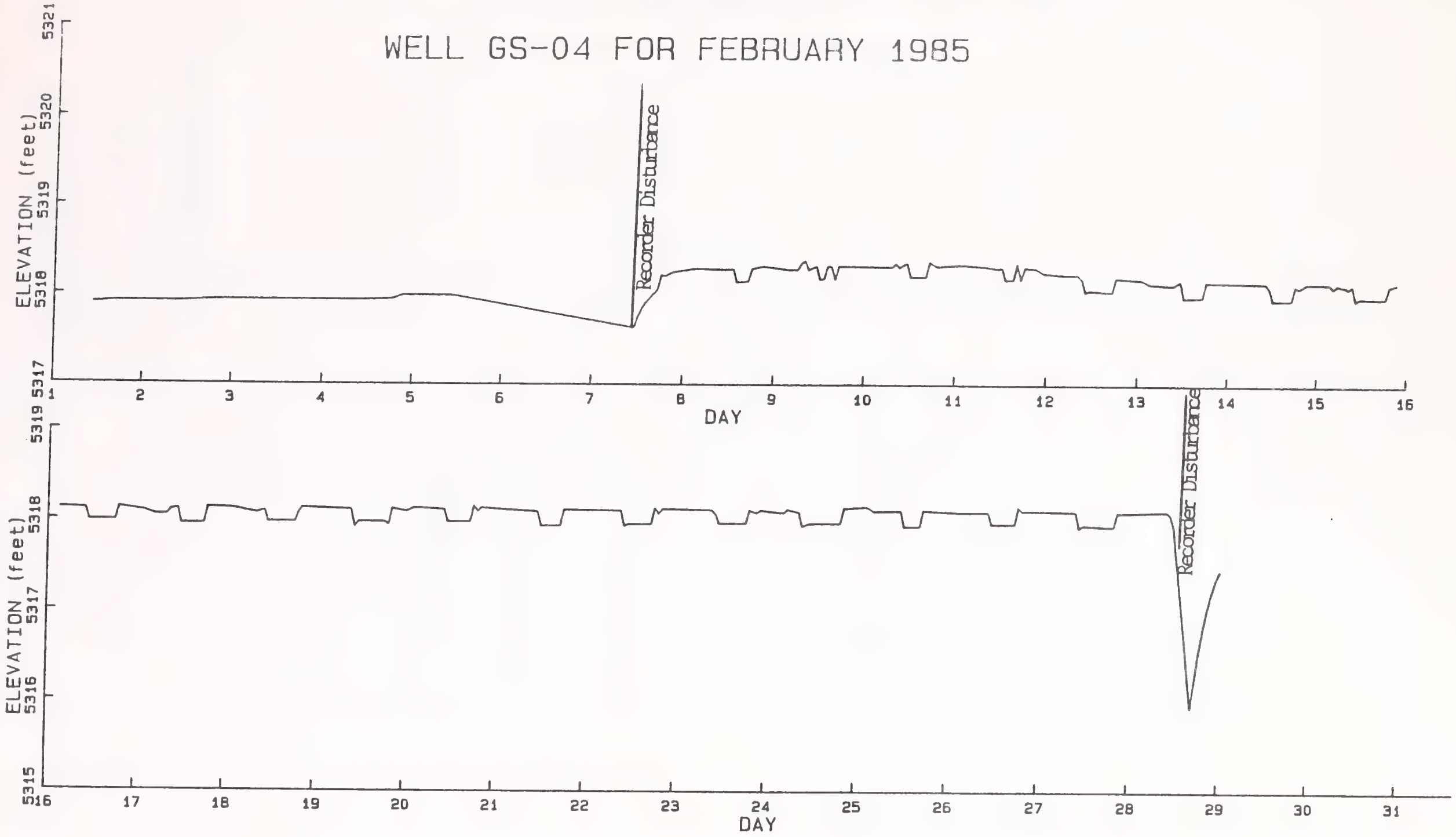
GROUND WATER ELEVATION OF MONITORING

WELL GS-04 FOR JANUARY 1985



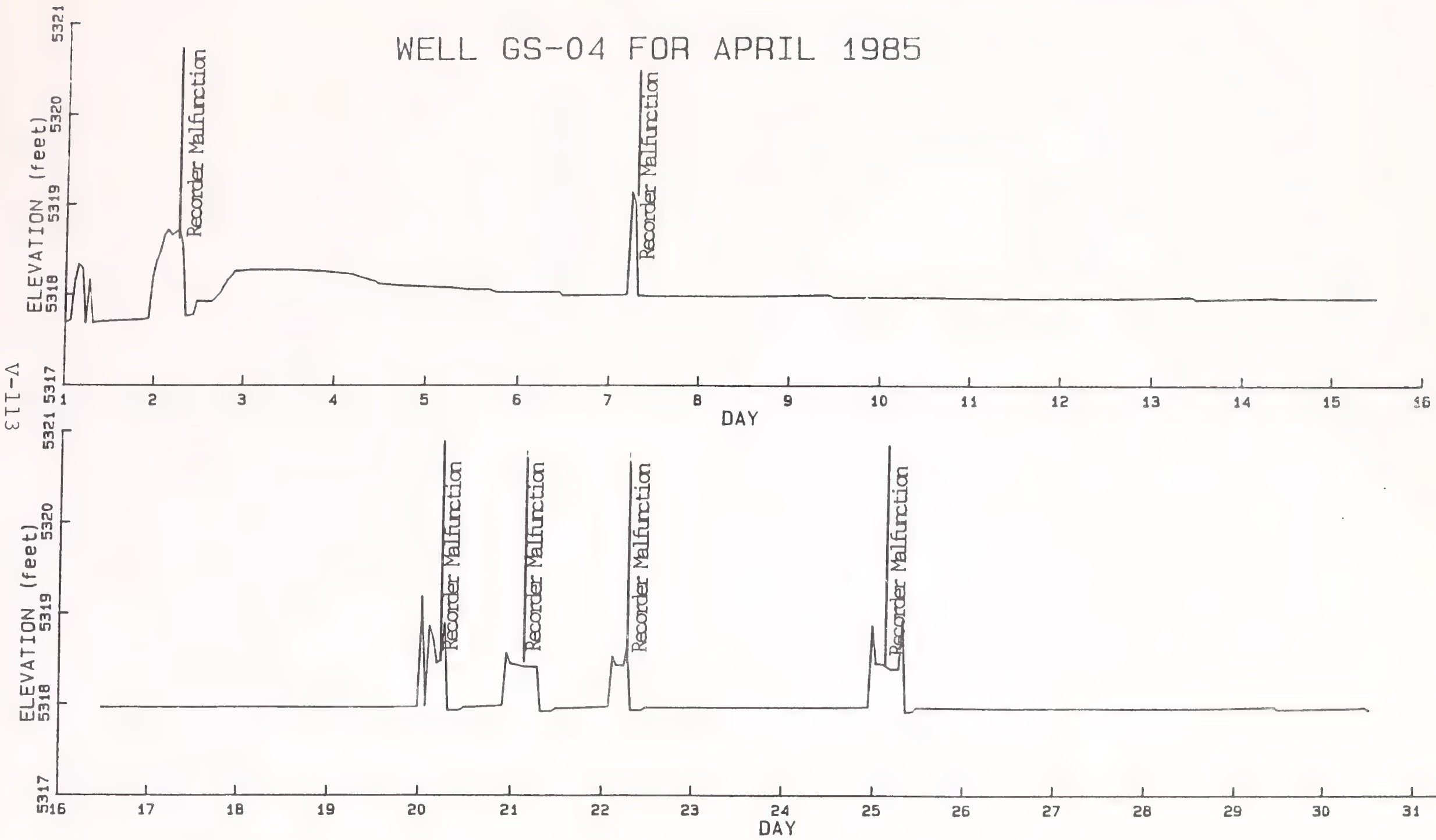
GROUND WATER ELEVATION OF MONITORING

WELL GS-04 FOR FEBRUARY 1985

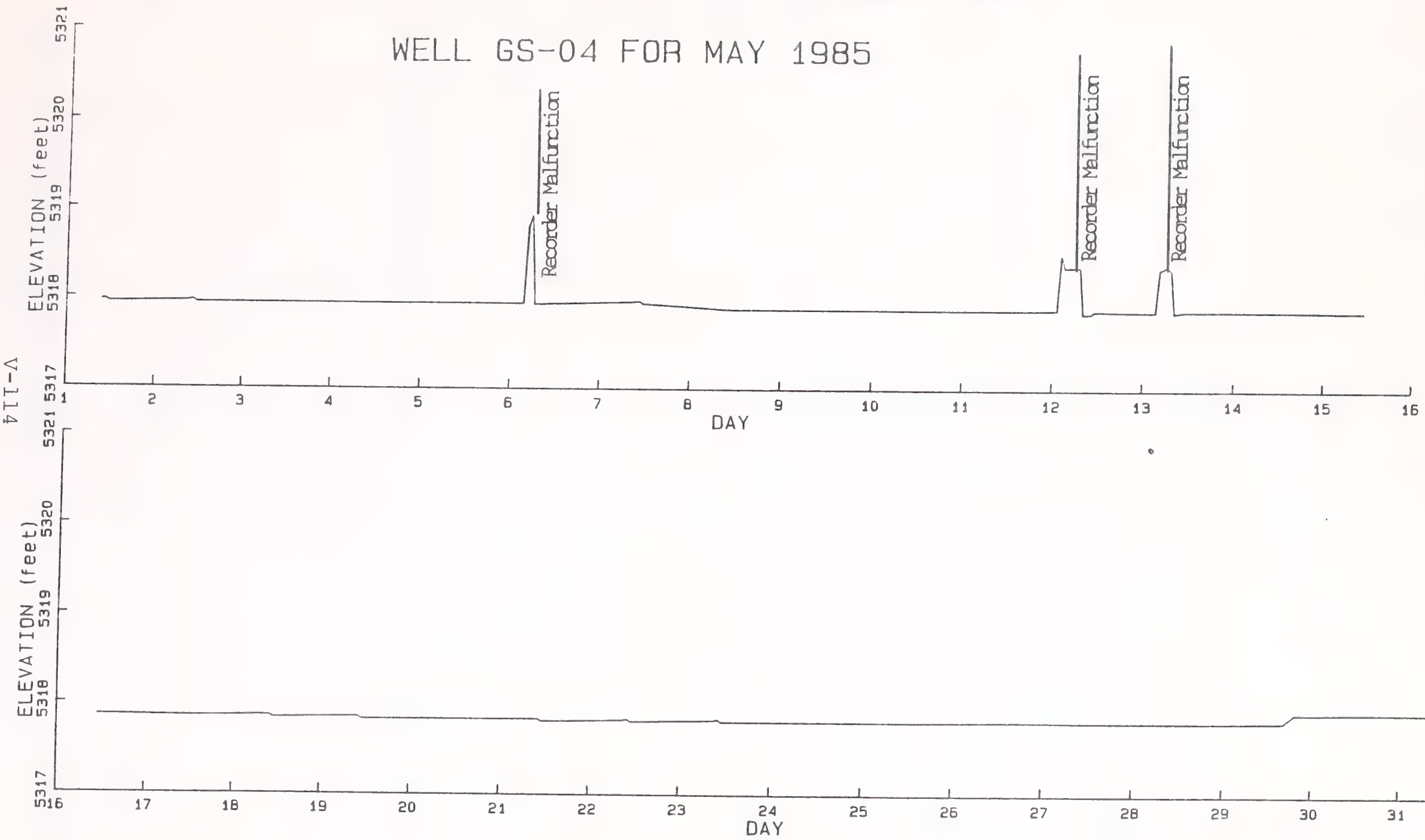


GROUND WATER ELEVATION OF MONITORING

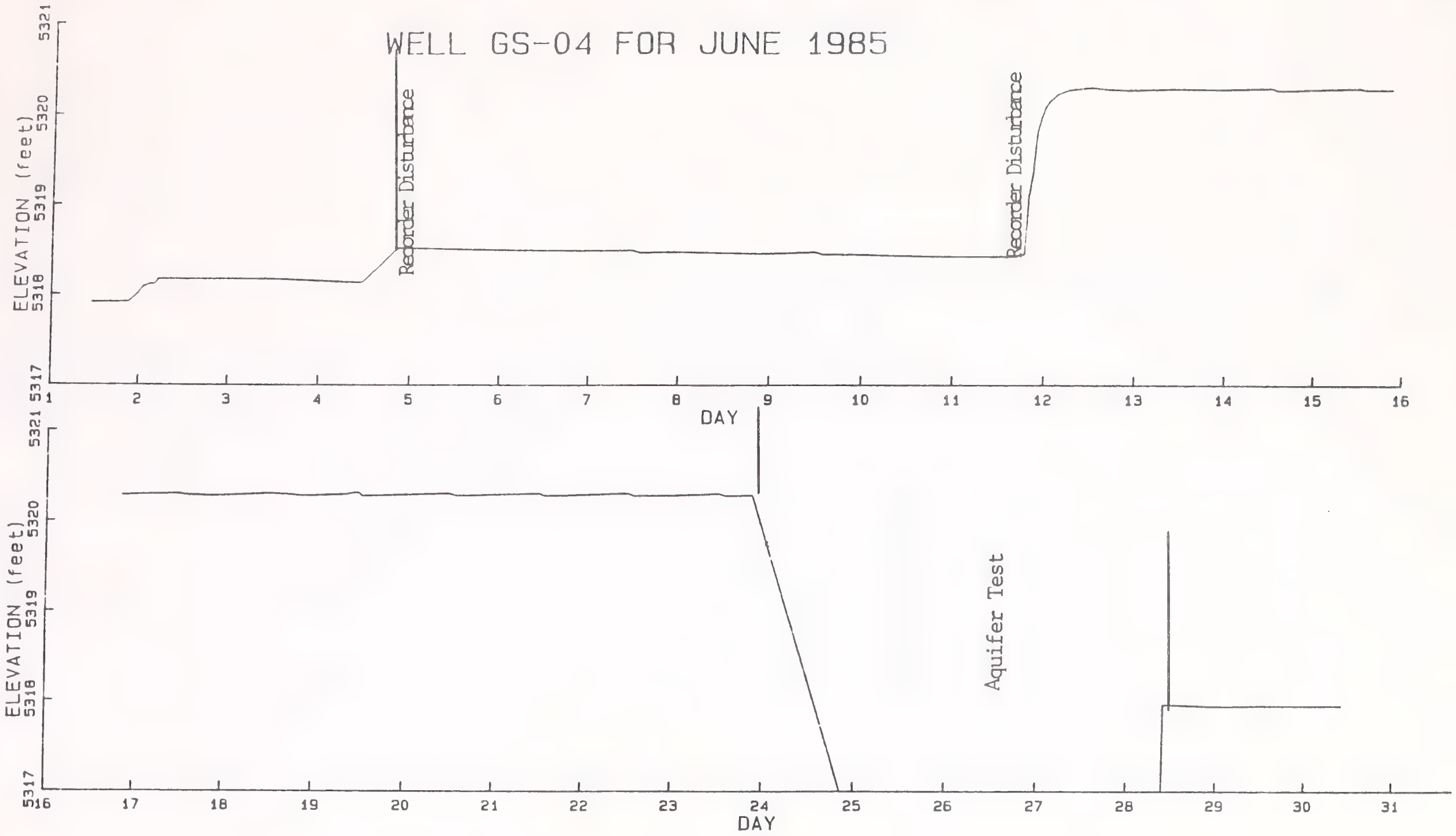
WELL GS-04 FOR APRIL 1985



GROUND WATER ELEVATION OF MONITORING WELL GS-04 FOR MAY 1985

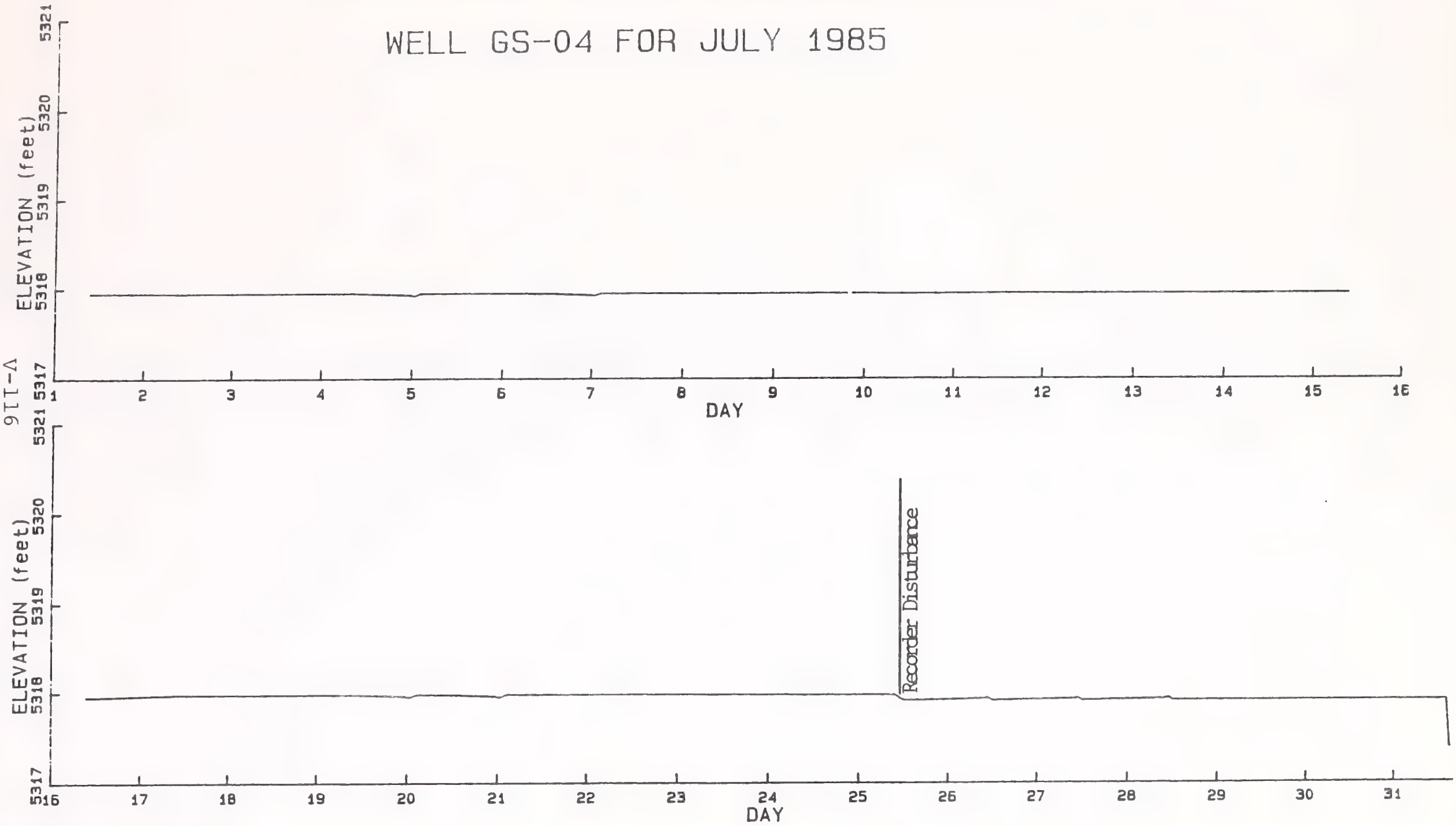


GROUND WATER ELEVATION OF MONITORING WELL GS-04 FOR JUNE 1985



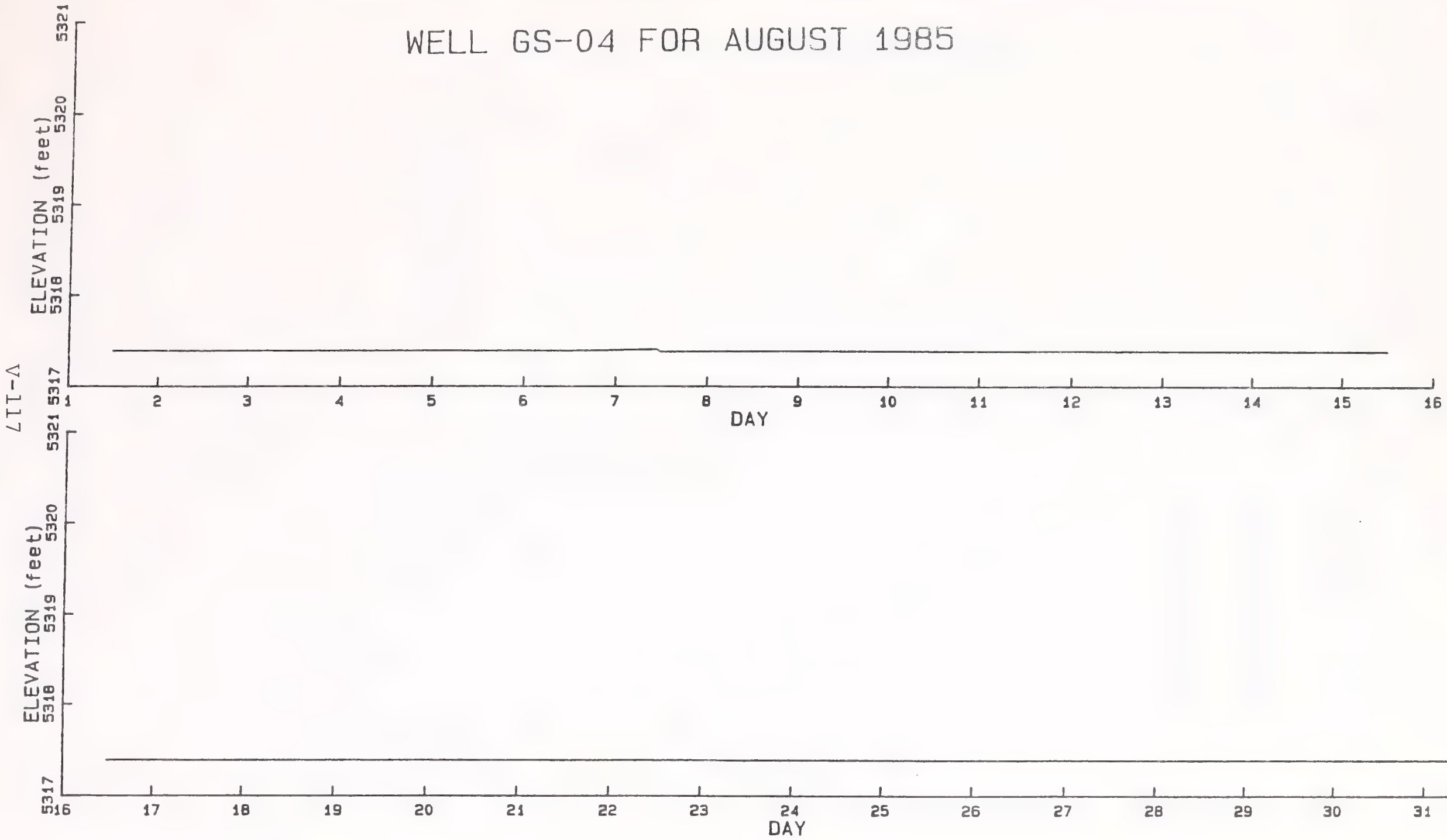
GROUND WATER ELEVATION OF MONITORING

WELL GS-04 FOR JULY 1985



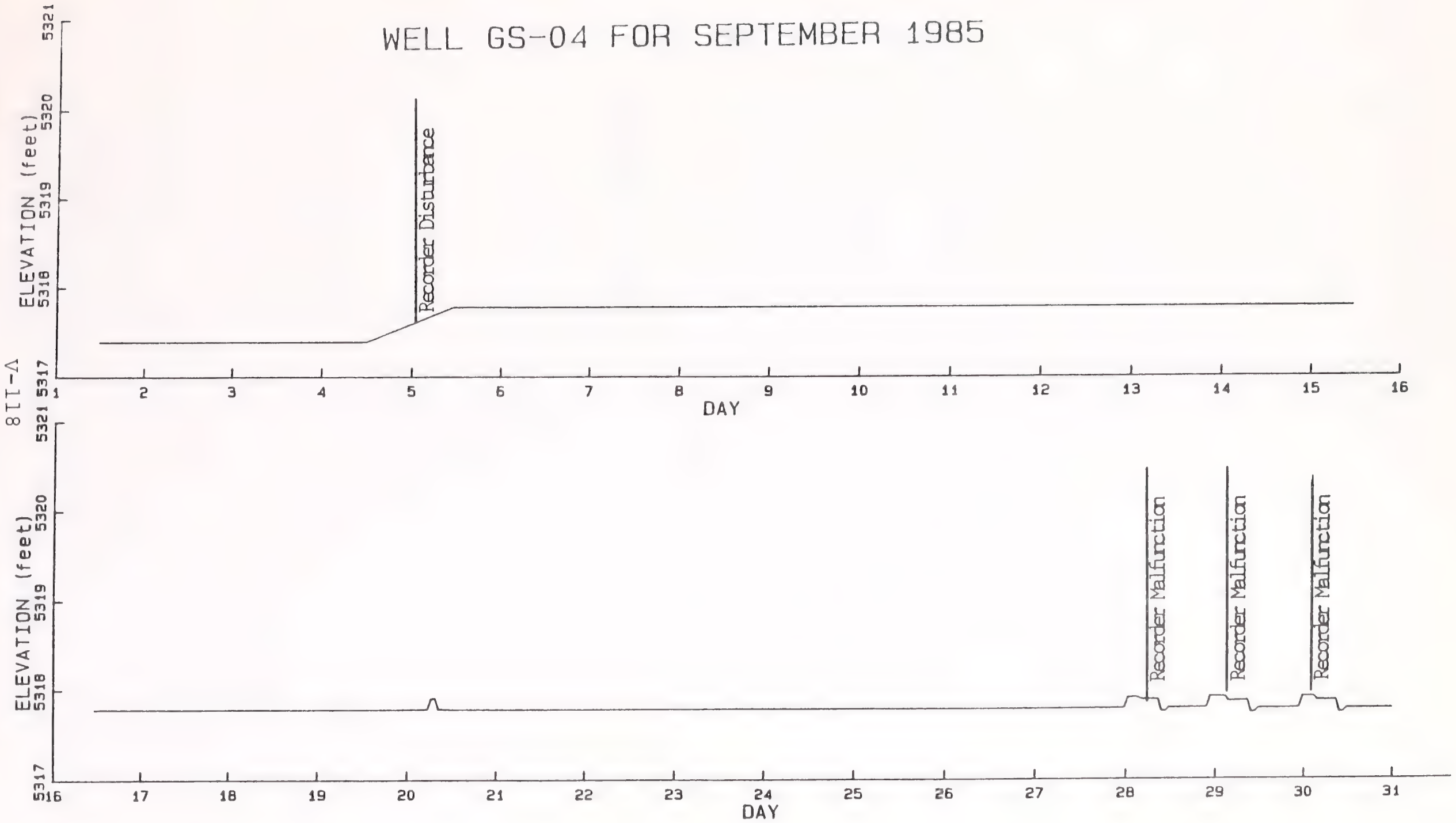
GROUND WATER ELEVATION OF MONITORING

WELL GS-04 FOR AUGUST 1985



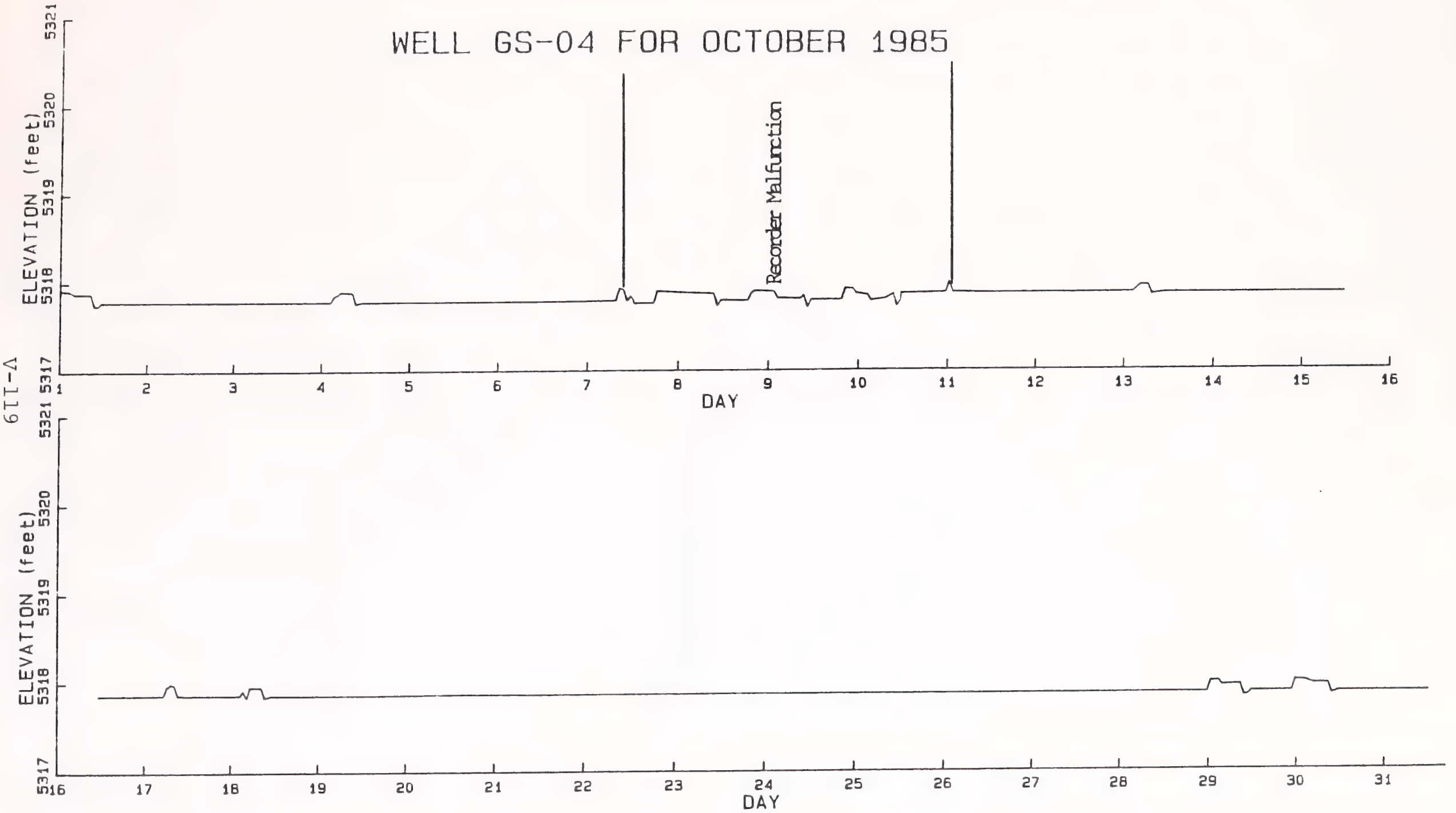
GROUND WATER ELEVATION OF MONITORING

WELL GS-04 FOR SEPTEMBER 1985



GROUND WATER ELEVATION OF MONITORING

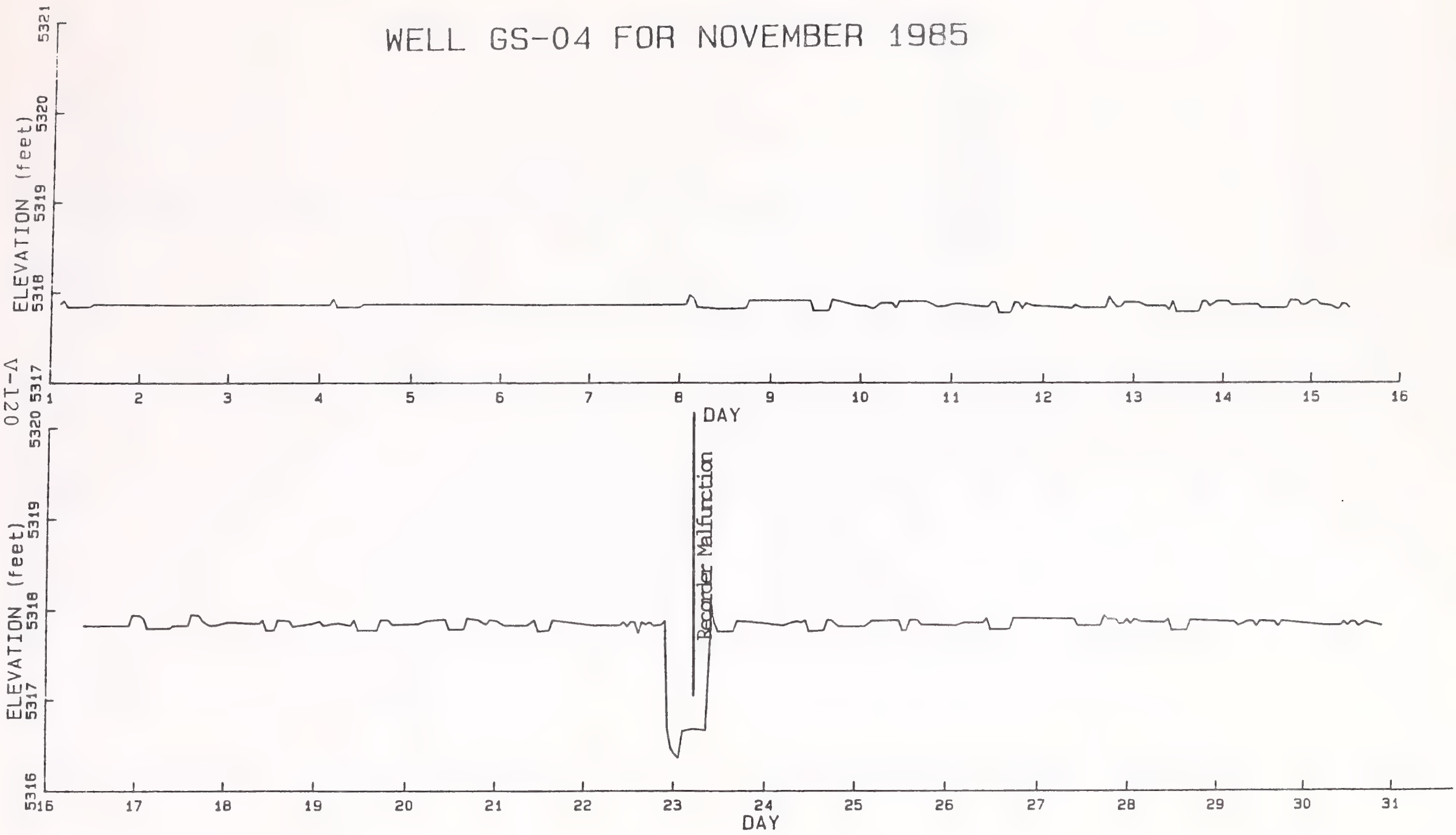
WELL GS-04 FOR OCTOBER 1985



V-119

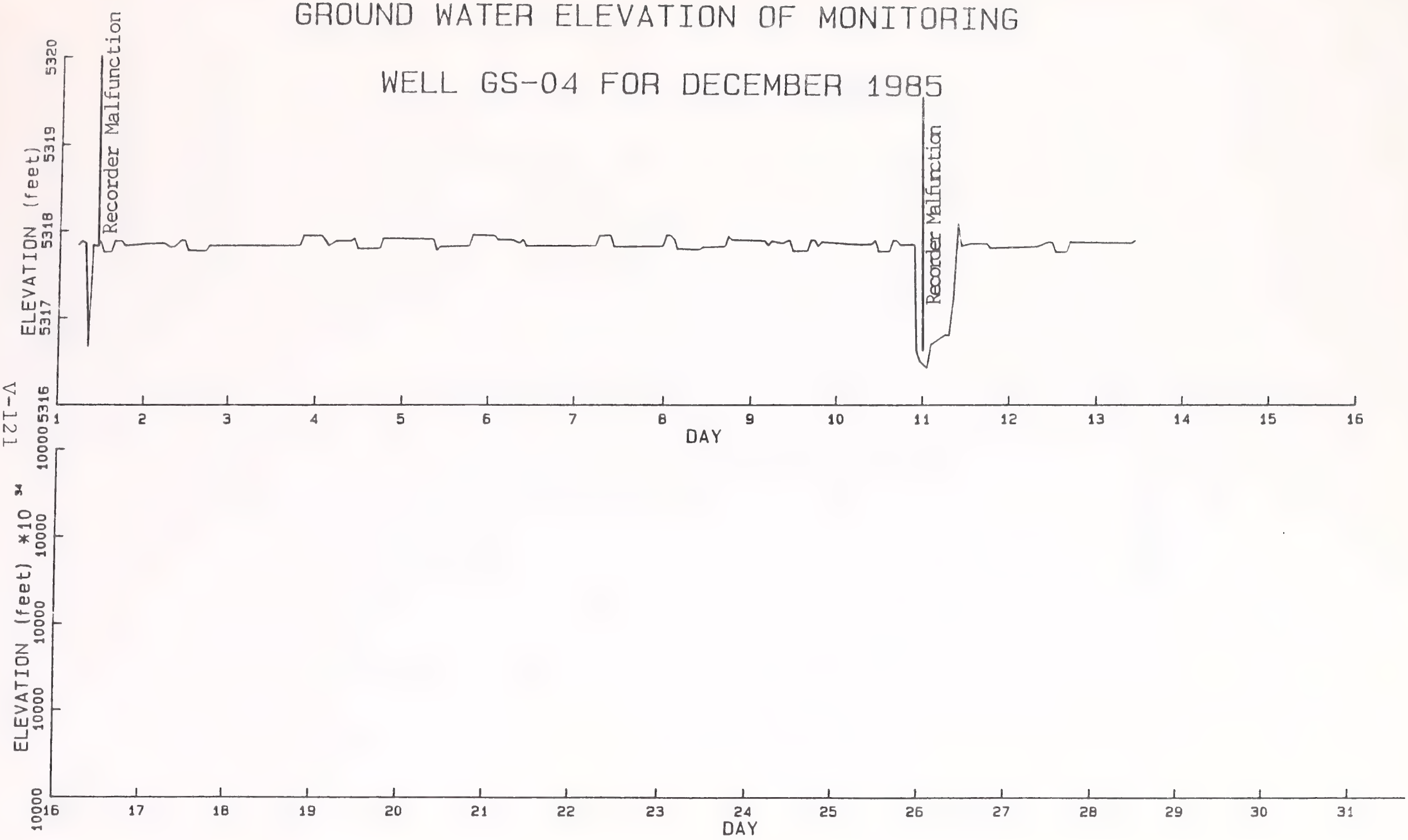
GROUND WATER ELEVATION OF MONITORING

WELL GS-04 FOR NOVEMBER 1985



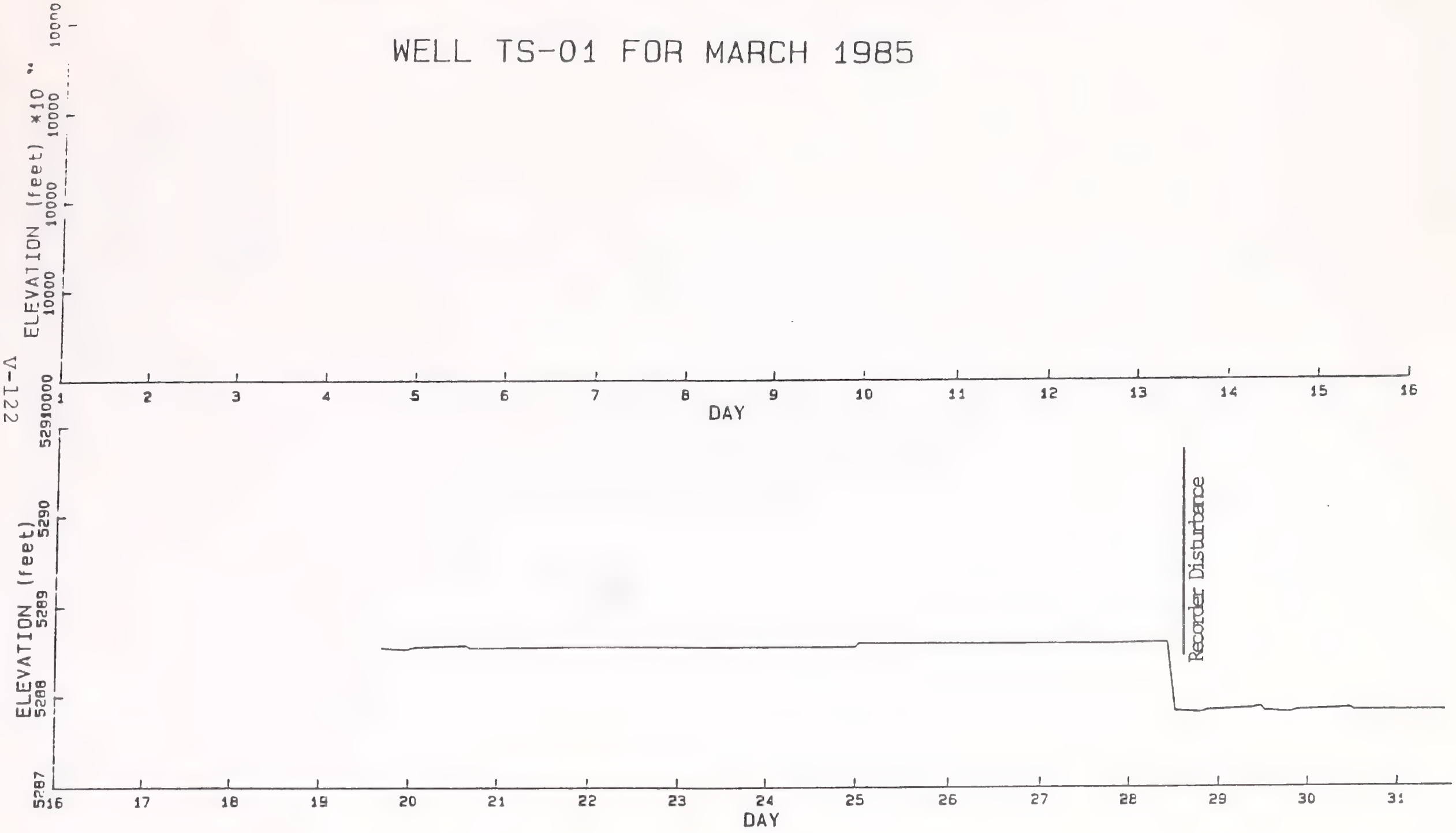
GROUND WATER ELEVATION OF MONITORING

WELL GS-04 FOR DECEMBER 1985

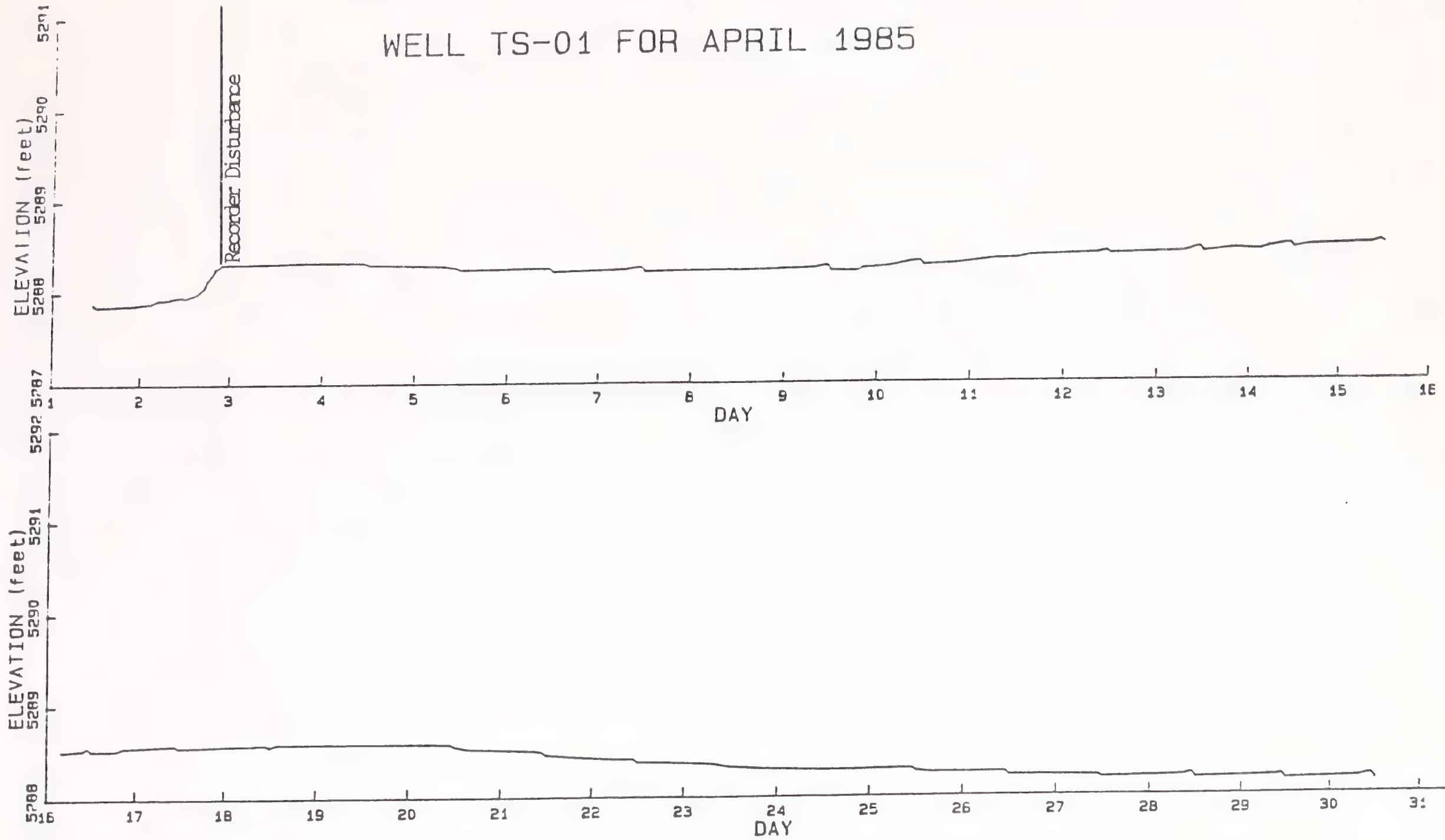


GROUND WATER ELEVATION OF MONITORING

WELL TS-01 FOR MARCH 1985

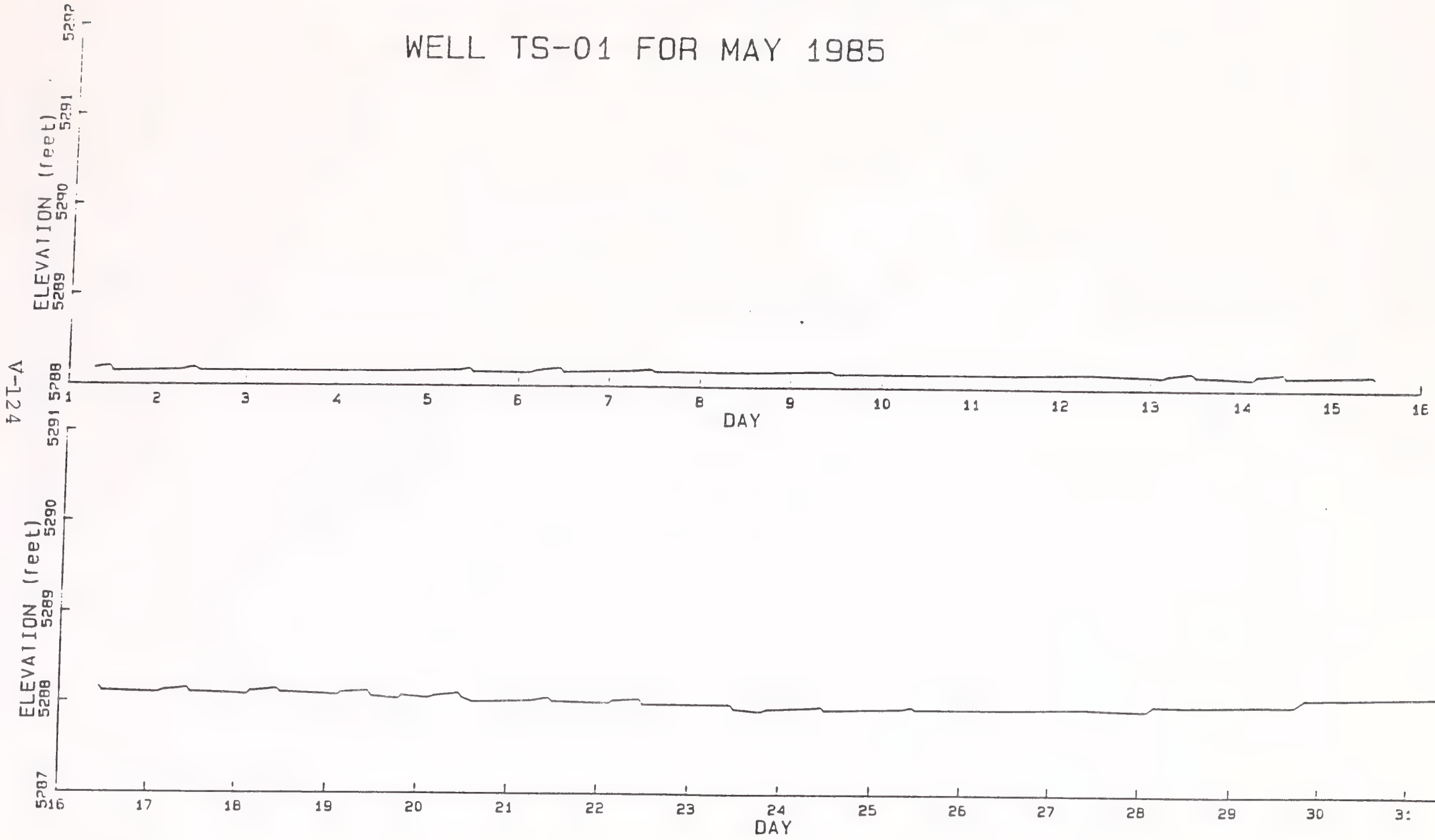


GROUND WATER ELEVATION OF MONITORING WELL TS-01 FOR APRIL 1985



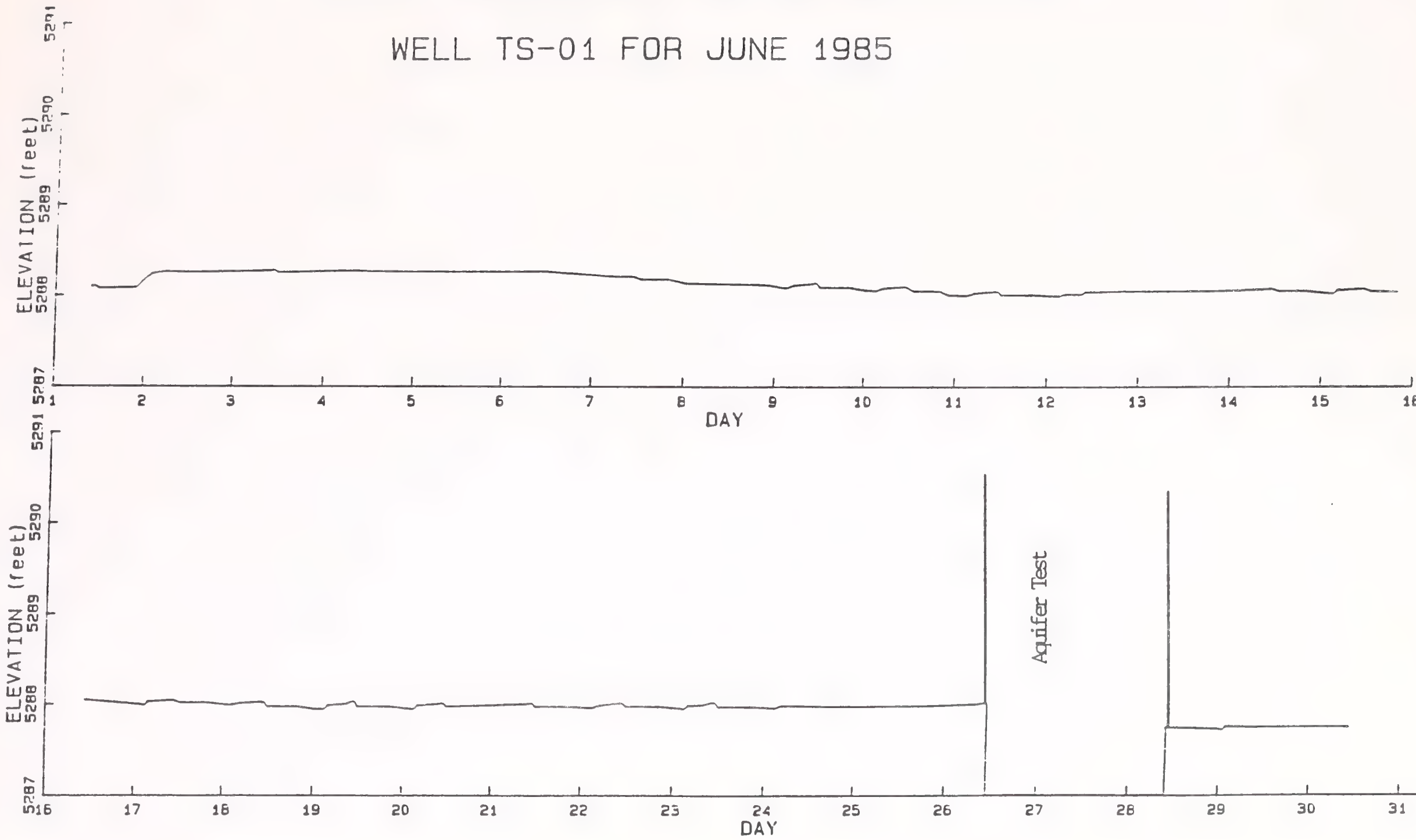
GROUND WATER ELEVATION OF MONITORING

WELL TS-01 FOR MAY 1985



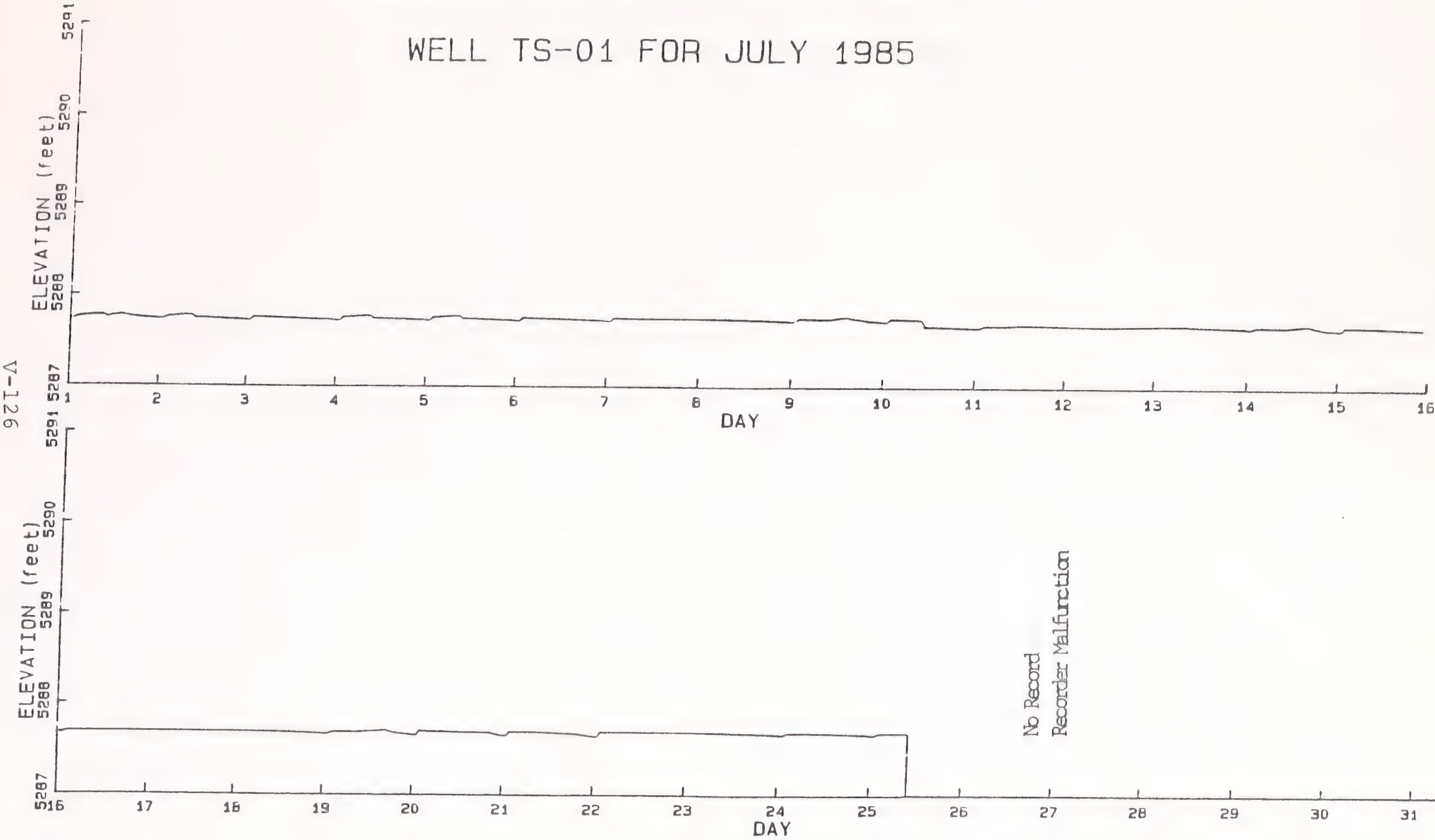
GROUND WATER ELEVATION OF MONITORING

WELL TS-01 FOR JUNE 1985

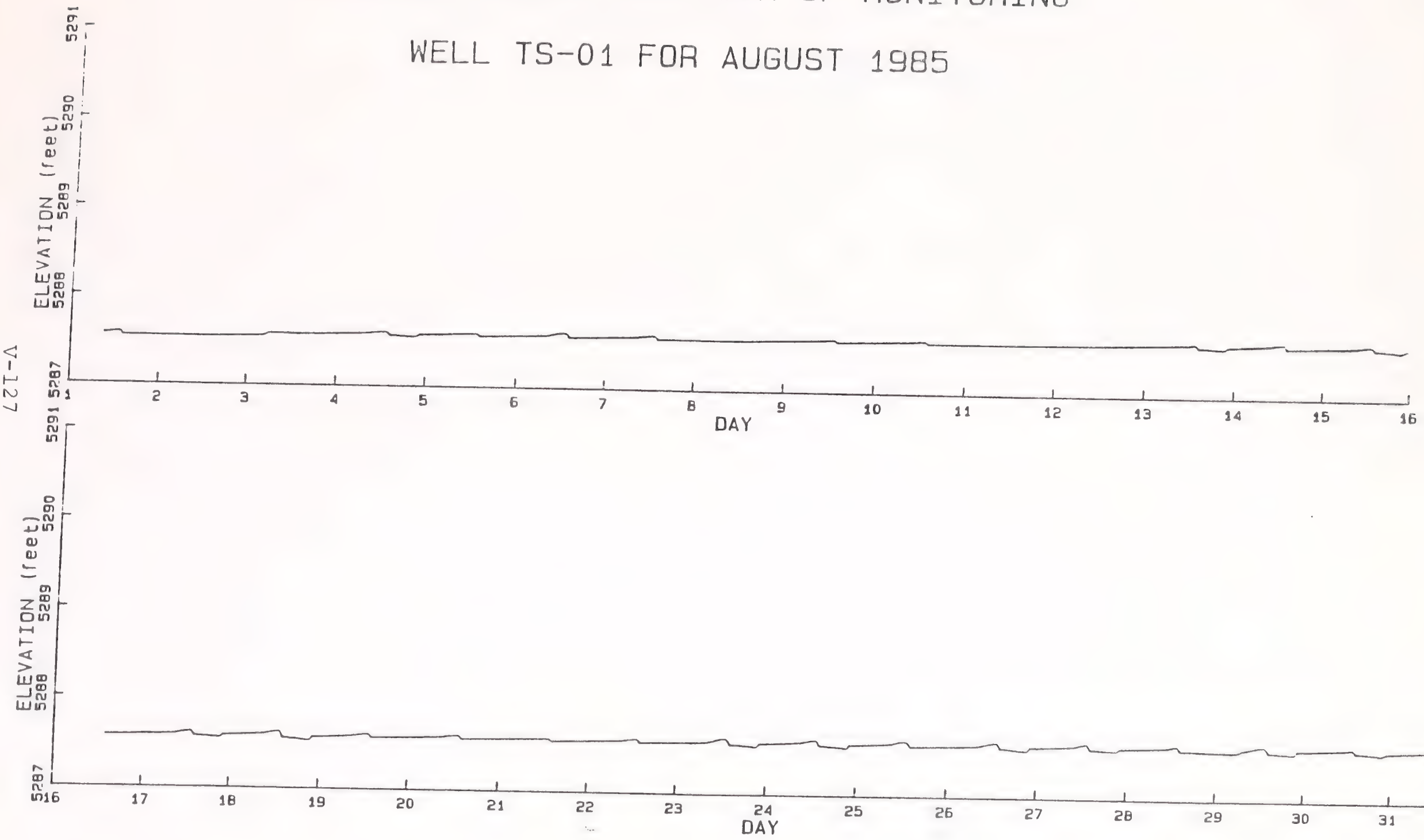


GROUND WATER ELEVATION OF MONITORING

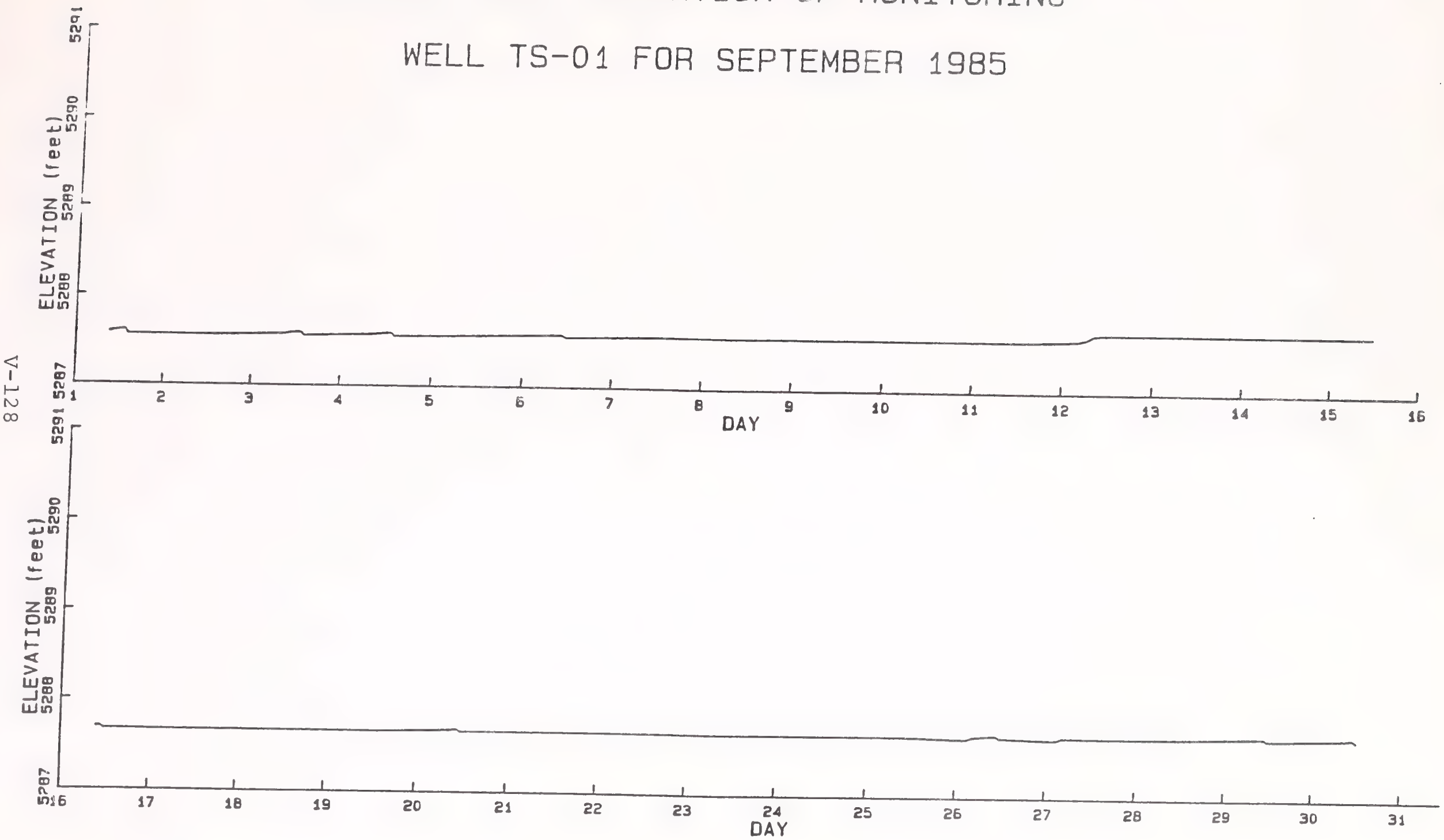
WELL TS-01 FOR JULY 1985



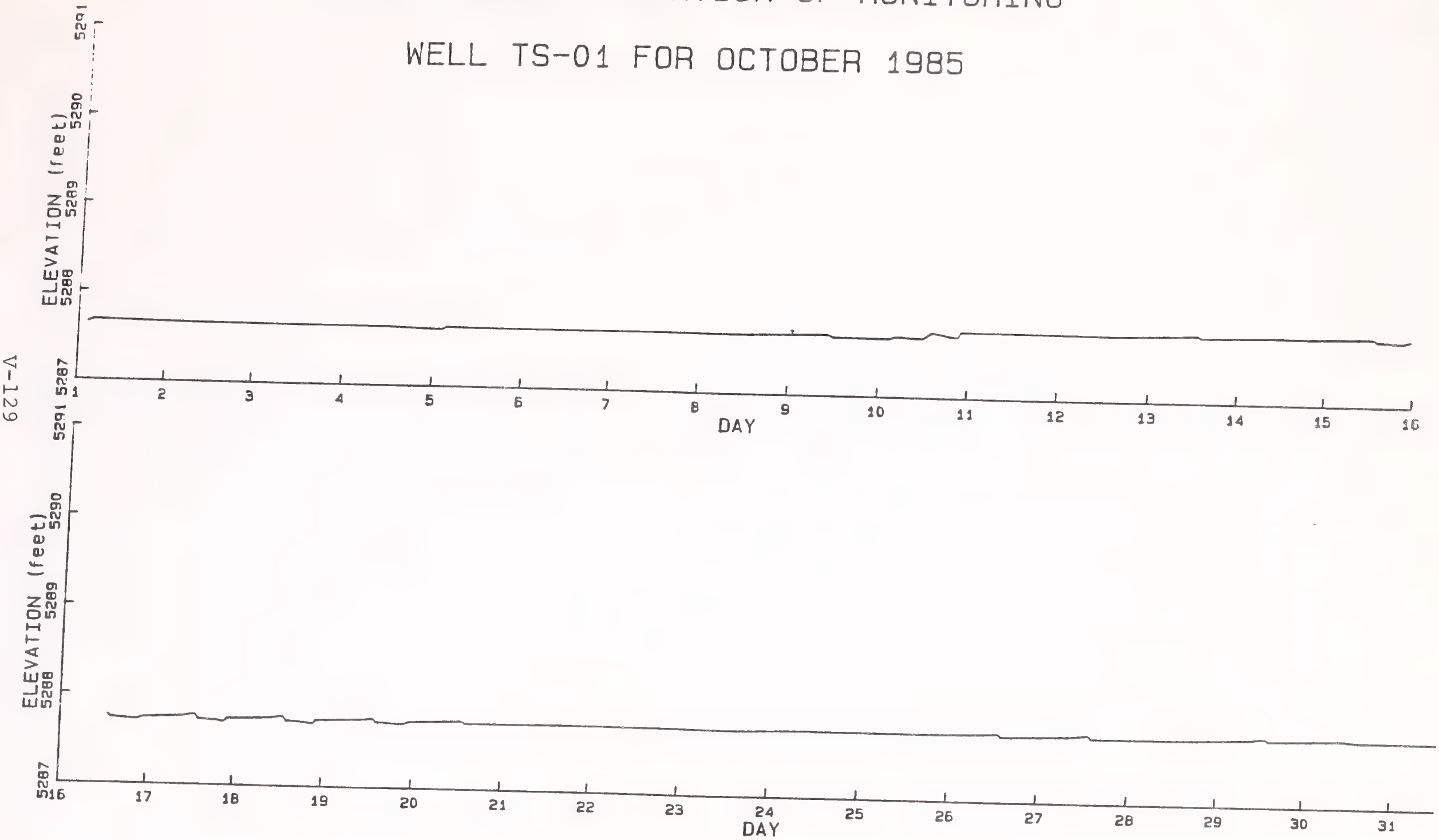
GROUND WATER ELEVATION OF MONITORING WELL TS-01 FOR AUGUST 1985



GROUND WATER ELEVATION OF MONITORING WELL TS-01 FOR SEPTEMBER 1985

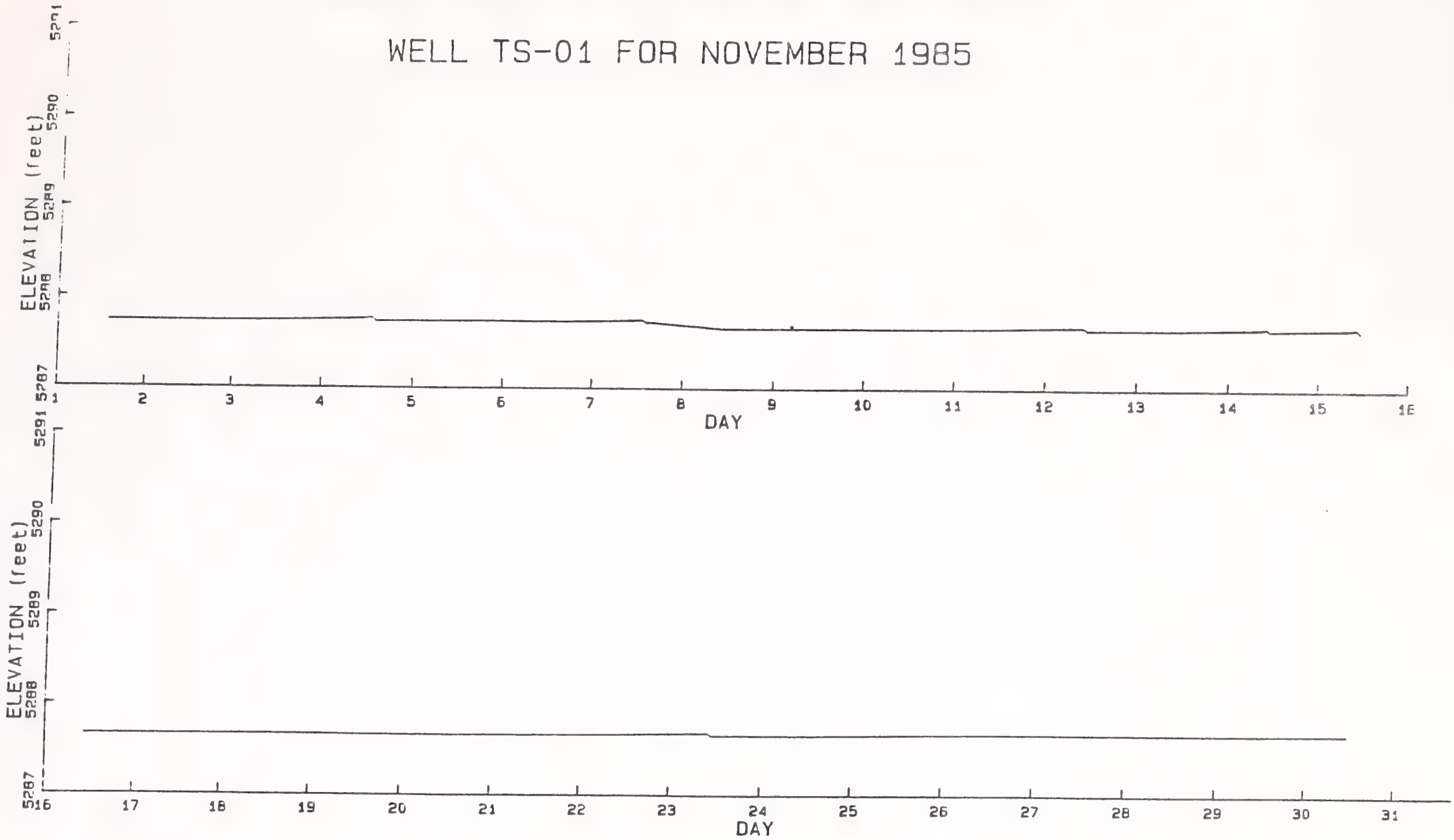


GROUND WATER ELEVATION OF MONITORING WELL TS-01 FOR OCTOBER 1985



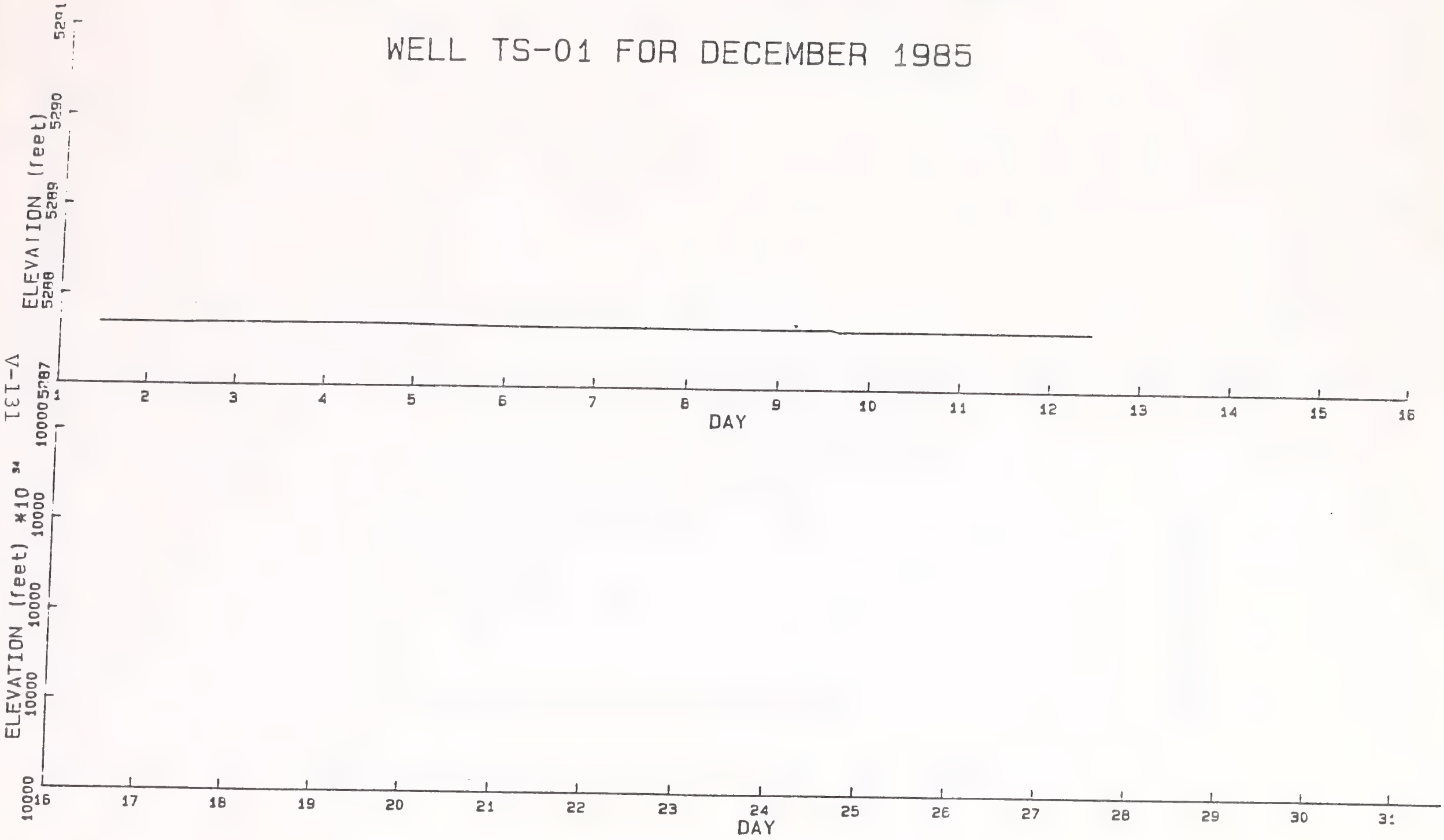
GROUND WATER ELEVATION OF MONITORING

WELL TS-01 FOR NOVEMBER 1985



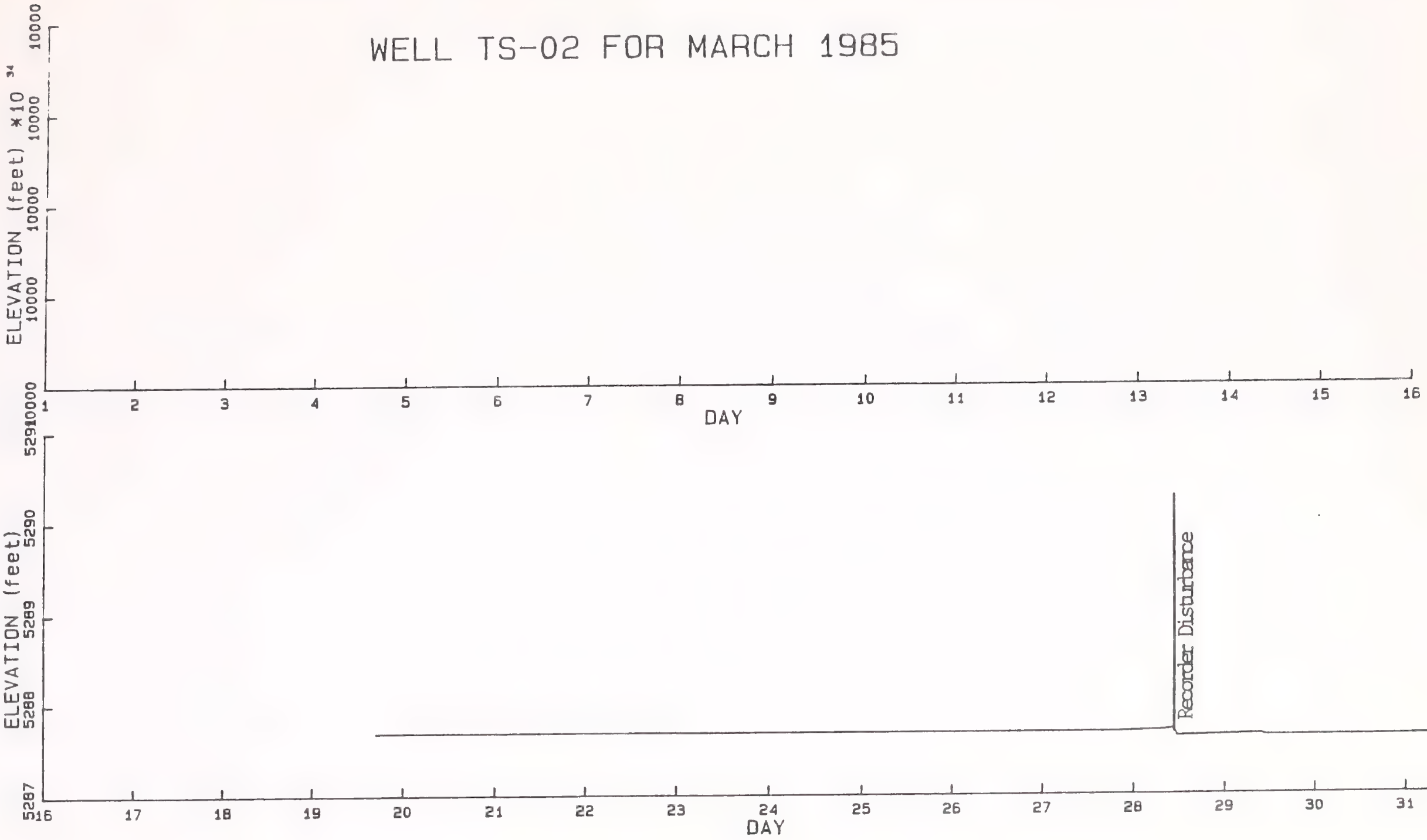
GROUND WATER ELEVATION OF MONITORING

WELL TS-01 FOR DECEMBER 1985



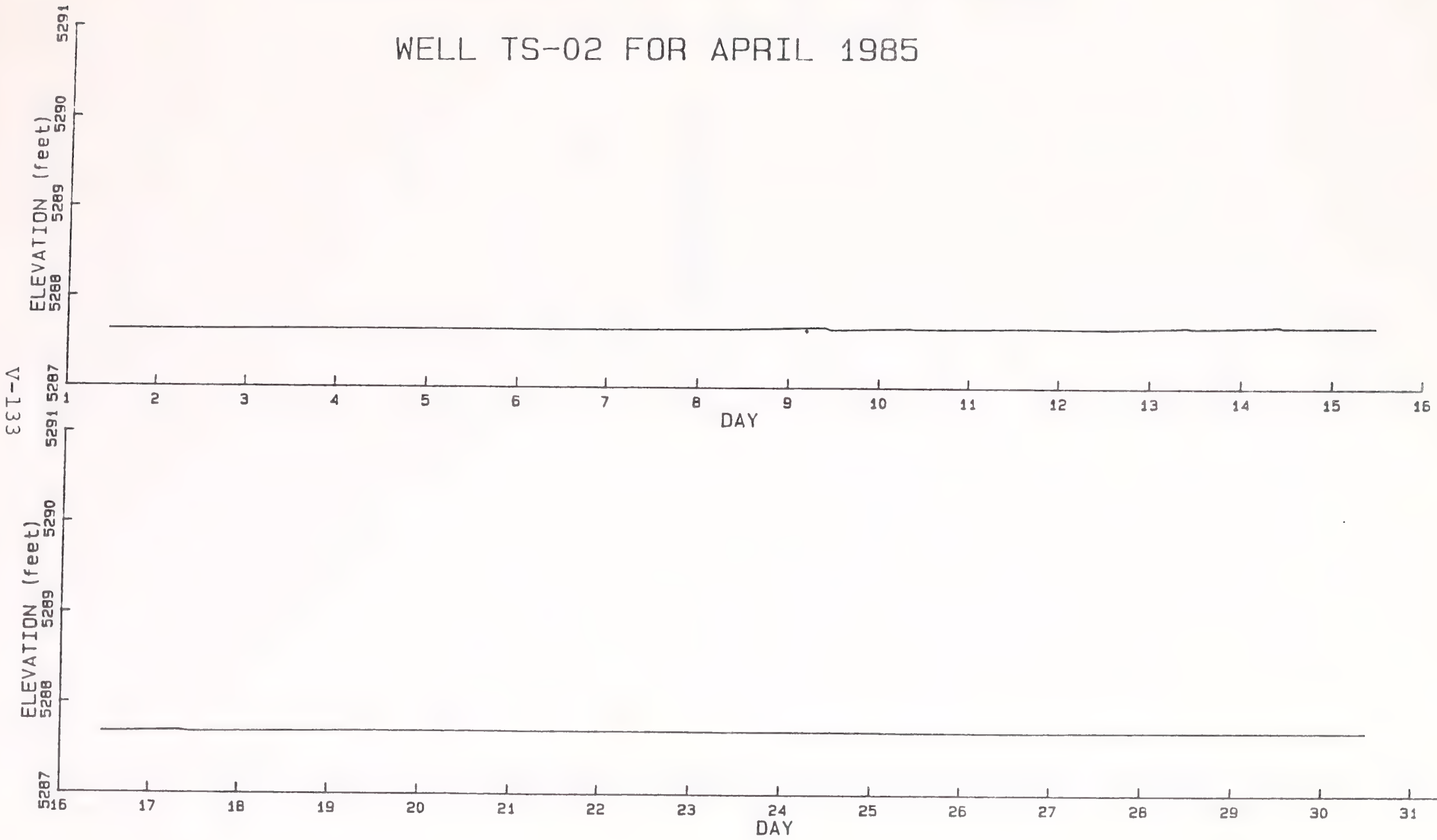
GROUND WATER ELEVATION OF MONITORING

WELL TS-02 FOR MARCH 1985



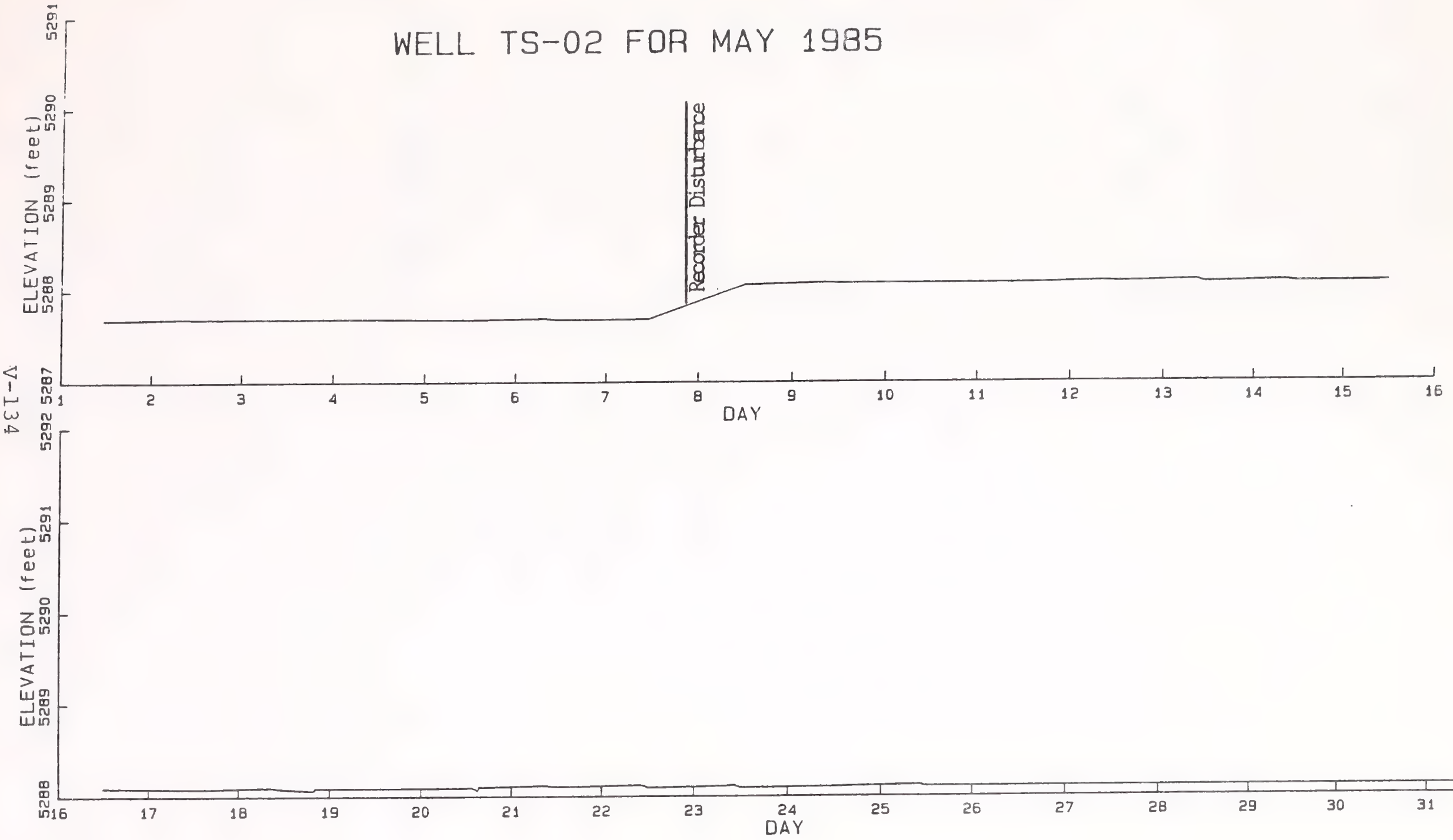
GROUND WATER ELEVATION OF MONITORING

WELL TS-02 FOR APRIL 1985



GROUND WATER ELEVATION OF MONITORING

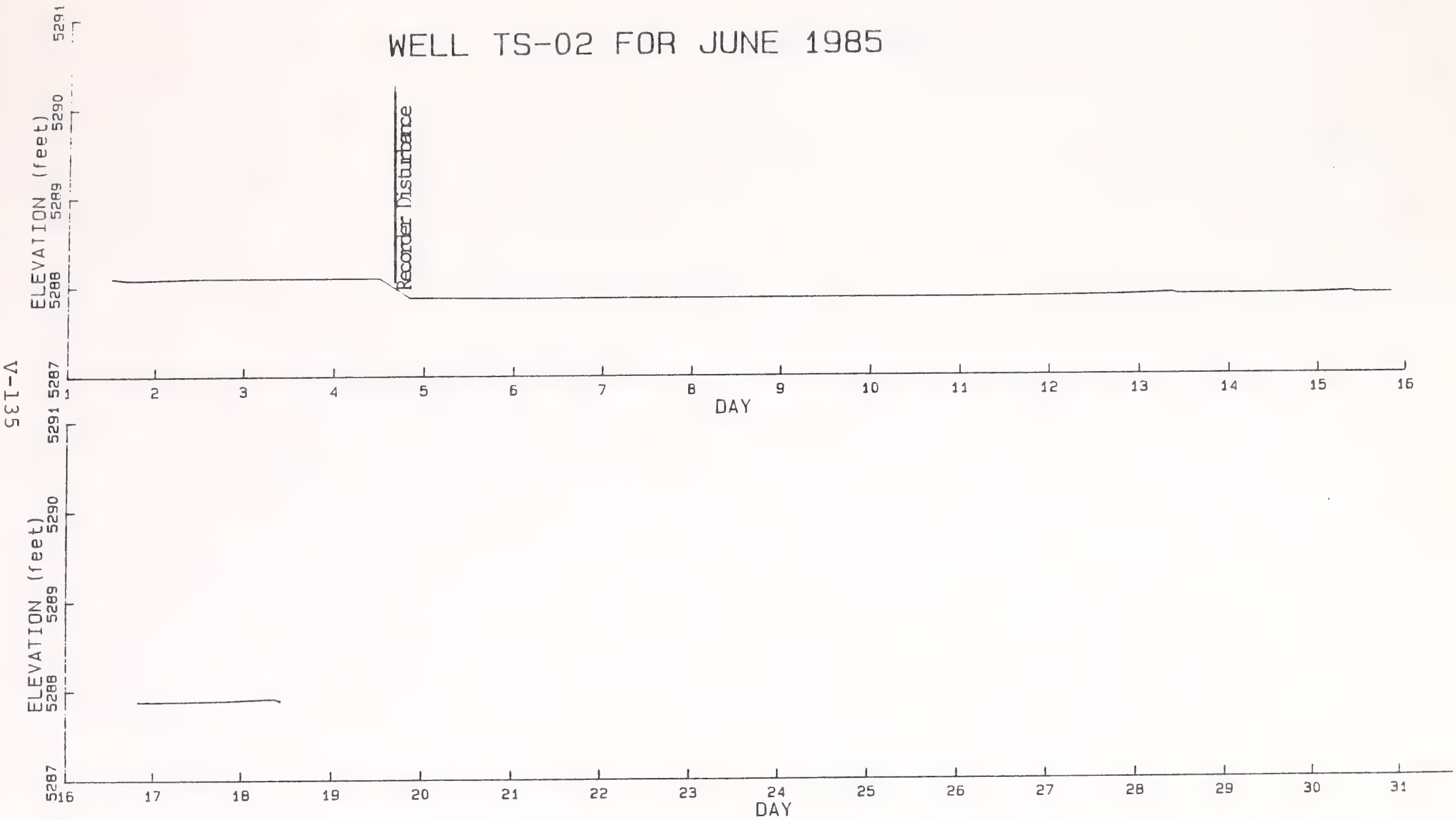
WELL TS-02 FOR MAY 1985



V-13

GROUND WATER ELEVATION OF MONITORING

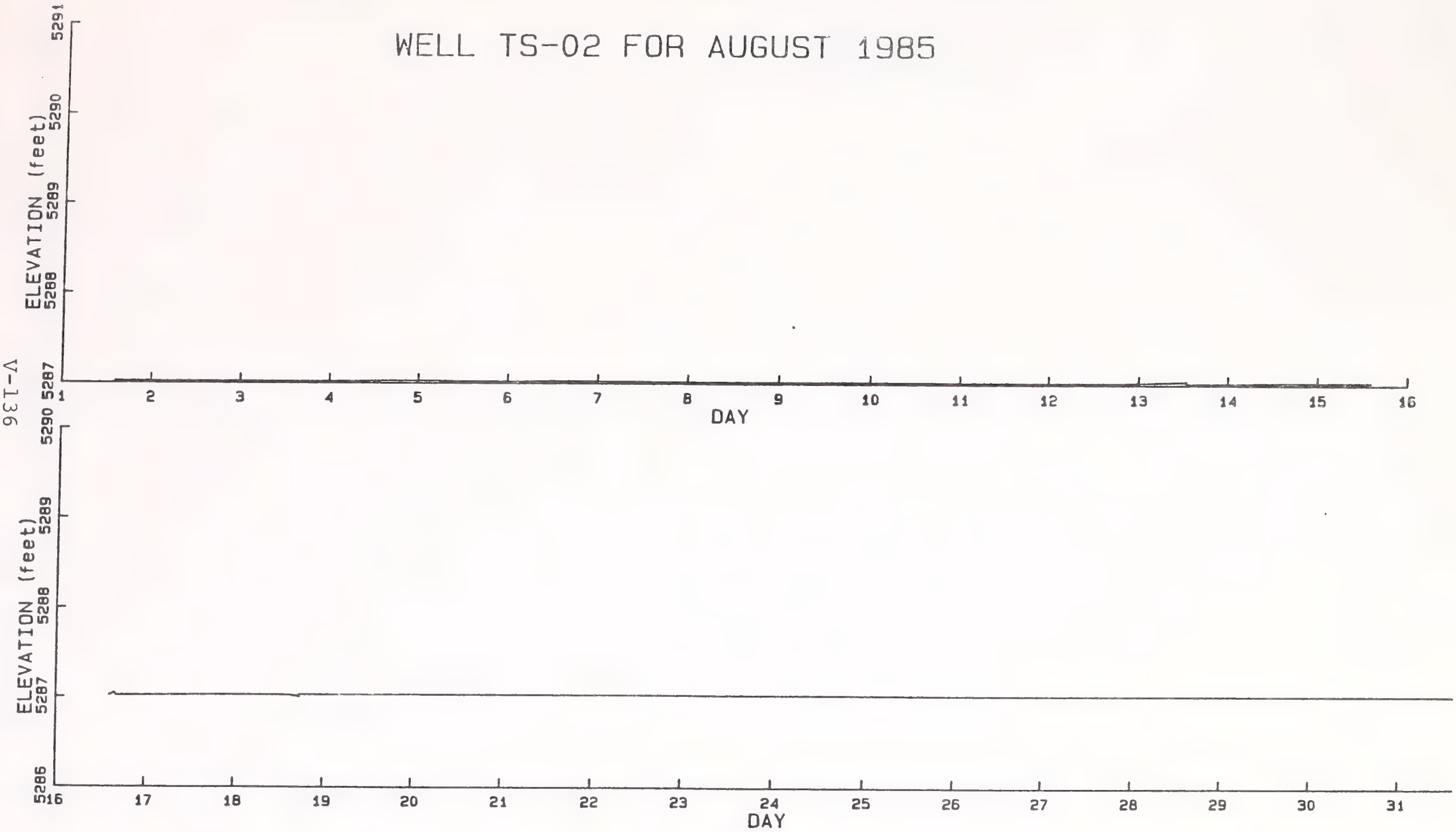
WELL TS-02 FOR JUNE 1985



V-13

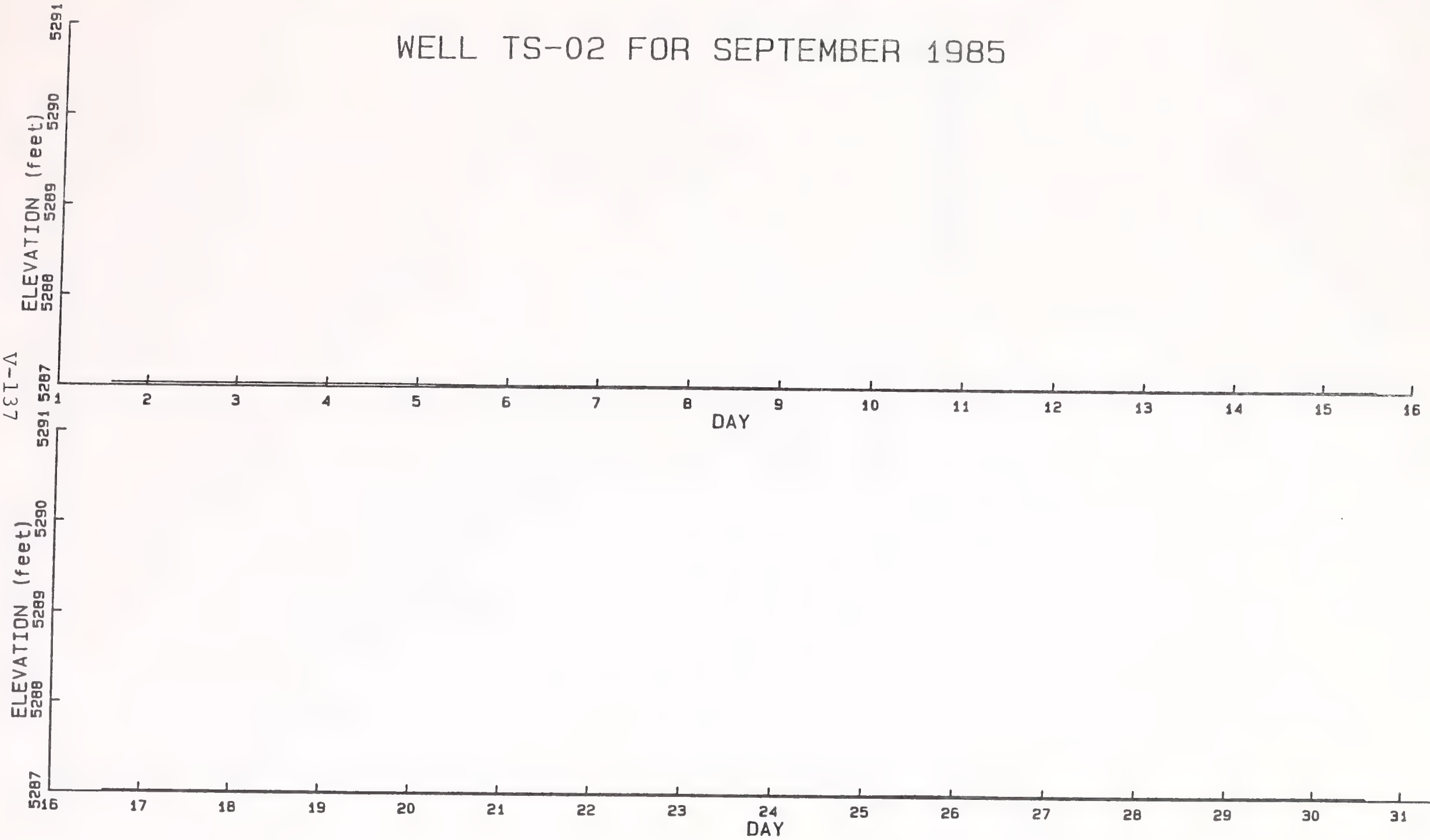
GROUND WATER ELEVATION OF MONITORING

WELL TS-02 FOR AUGUST 1985



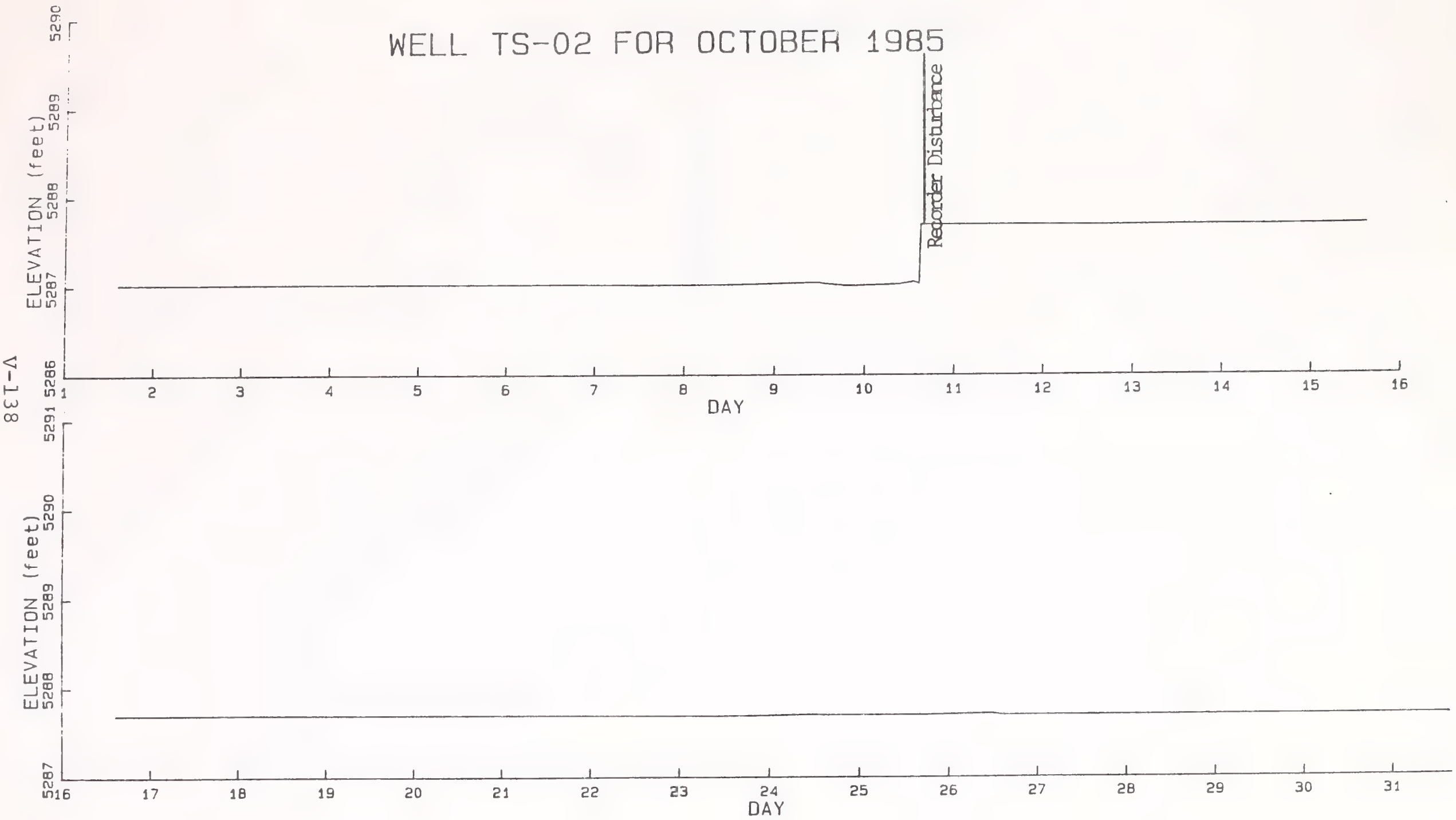
GROUND WATER ELEVATION OF MONITORING

WELL TS-02 FOR SEPTEMBER 1985



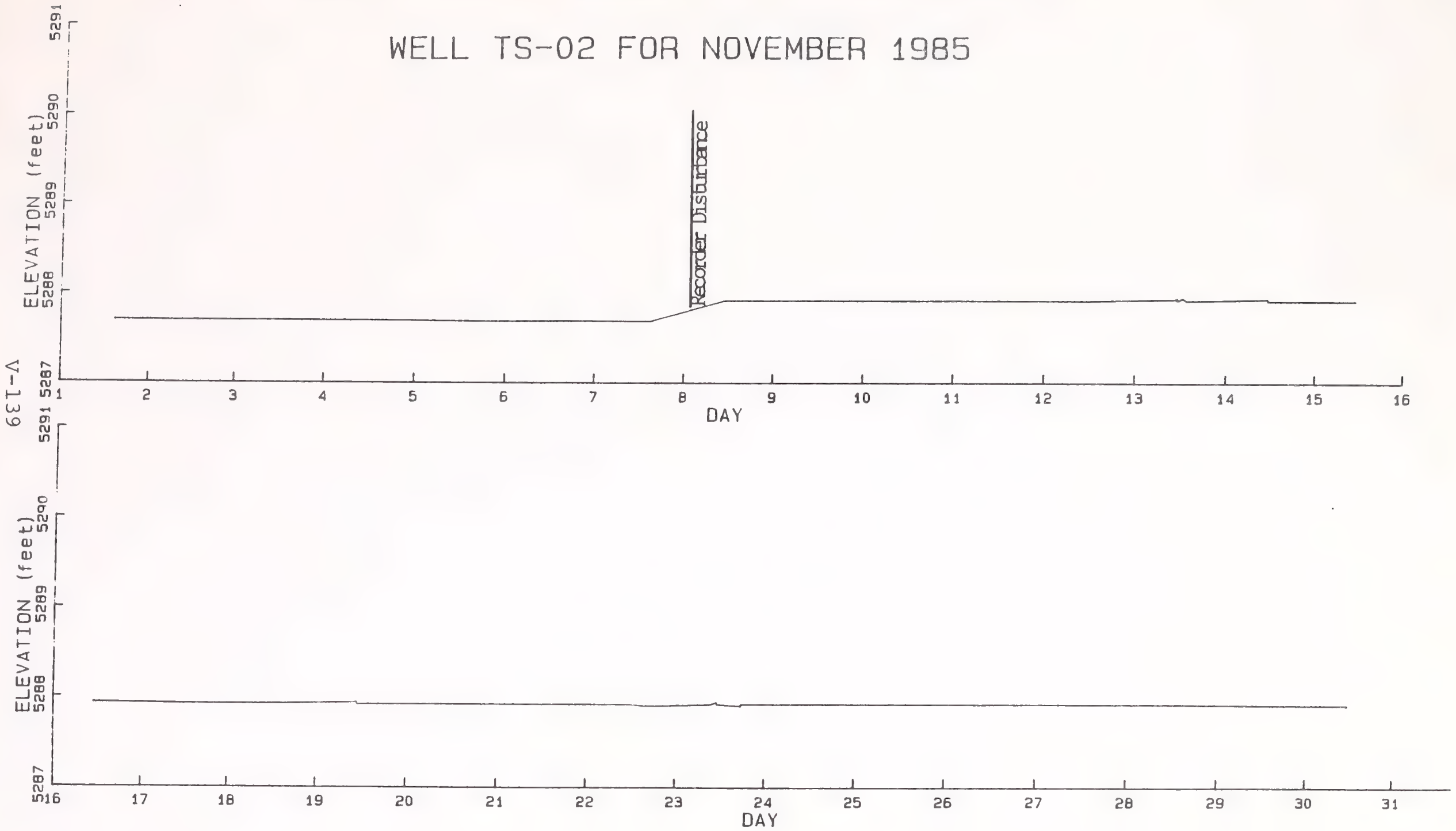
GROUND WATER ELEVATION OF MONITORING

WELL TS-02 FOR OCTOBER 1985



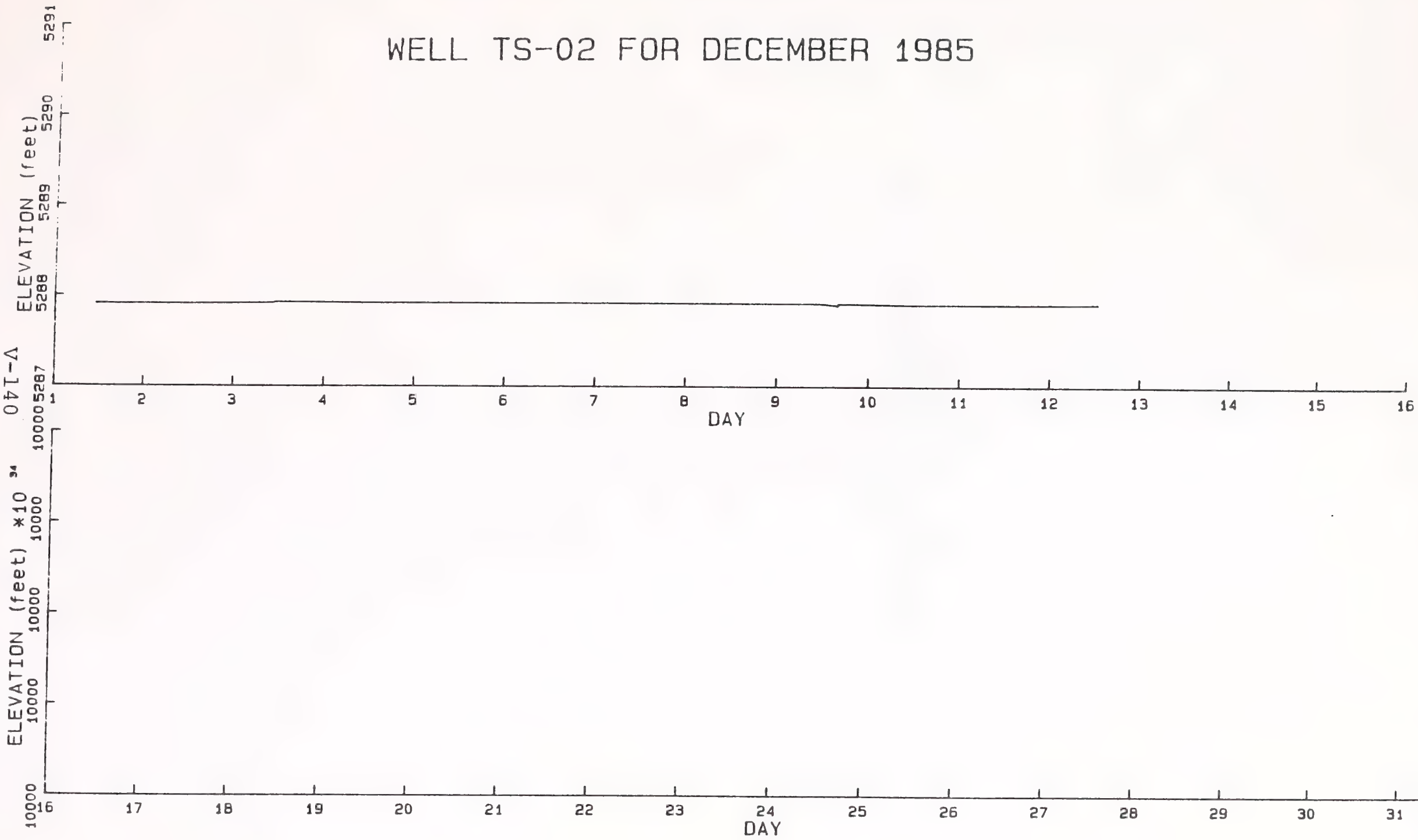
GROUND WATER ELEVATION OF MONITORING

WELL TS-02 FOR NOVEMBER 1985



GROUND WATER ELEVATION OF MONITORING

WELL TS-02 FOR DECEMBER 1985



V-140

DRAFT

ATTACHMENT V-C
SILVER BOW CREEK RI AQUIFER TEST DATA AND JACOB DRAWDOWN PLOTS

AQUIFER TEST DATA

STILLER AND ASSOCIATES
CONSULTING HYDROLOGISTS · GEOLOGISTS · ENGINEERS

WELL OBSERVED (Data Reported on This Form) GC-01
WELL TESTED GS-01
TEST DATE 6-24-85

Project SBC CERCLA Personnel GROTBO / REDIEKE

WELL DESCRIPTION

State MONTANA County SILVER BOW Location: T 3N R 8W Sec. 17 Tract CDD

Borehole Diam.(in) 6 Well Diam.(in) 4 Well Depth(ft) 14.5 Perforated Zone(s)(ft) 9.5 - 14.5

Desc. of MP Top of PVC Stick-up(ft) 1.9 SWL below MP(ft) 3.5 SWL below GS(ft) 1.6

Aquifer Name SBC alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand, gravel

TEST DESCRIPTION

Test Type: (Circle One) (1.) Pumping Well Drawdown; 2. Observation Well Drawdown; 3. Pumping Well Recovery; 4. Observation Well Recovery; 5. Bailer Recovery; 6. Slug Injection or Removal; 7. Hvorslev Test; 8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) 7 Pump hp. & type 0.5 H.P. S-6 Pump Depth(ft) 13.5

Water Quality Sample Taken? yes (no) Specific Conductance (μmhos/cm @ 25°C) Temp(°C) Time

Avg. Discharge(gpm) 2.0 Test Duration(min) 278 Max WL Change(ft) 7.74 Transmissivity (gpd/ft)

Storativity Hydraulic Conductivity(gpd/ft²) Specific Capacity(gpm/ft of drawdown) 2 GPM / 7.695 = .26

REMARKS SBC stream stage : 2 7/8" ; SBC located ≈ 18-20' S of GS-01 ; Used 50 psi transducer ; zero offset (-1.920) ; sensitivity (1.0138)

Date & hour	Time	TRANSDUCER READING	BAROMETER (in.)	DISCHARGE (gpm)	HEAD (ft.)	DRAWDOWN (ft)	TEMP (°C)	SC. (μmhos @ 25°C)	pH (S.U.)
6-24-85 1422	0	+5.22	30.03		13.69	0			
1423	1	3.28			11.48	2.21			
1423.5	1.5	1.60			9.57	4.12			
1424	2	0.43		2.3	8.24	5.45			
1425	3	0.22		1.5	8.00	5.69			
1426	4	0.12		2.0	7.88	5.81			
1427	5	0.03		2.0	7.78	5.91			
1428	6	-0.03			7.71	5.98			
1430	8				-	-	15	340	6.7
1431	9	-0.18	30.01		7.56	6.13			
1433	11	-0.24		2.0	7.50	6.19			
1435	13	-0.29	30.01		7.44	6.25	12	350	6.9
1437	15	-0.30			7.43	6.26			
1439	17	-0.33	30.01		7.39	6.30			
1442	20	-0.38	30.01	2.0	7.34	6.35			
1447	25	-0.37			7.35	6.34	13	344	7.0
1449	27			1.95					
1452	30	-0.43			7.28	6.41			
1455	31		30.02						
1456	34								
1457	35	-0.46			7.23	6.46	14	351	6.9
1500	38	-0.47		1.95	7.22	6.47			
1503	41	-0.74		2.1	6.91	6.78			
1504	42	-0.82		2.1	6.82	6.87			

Adj-1 (1)

AQUIFER TEST DATA
(Cont.)

WELL OBSERVED GS-01
(Data Reported On This Form)

WELL TESTED GS-01

Project SBC CERCLA Personnel GROTBO / REDISKE TEST DATE 6-24-85

Date & hour 6/24/85	Time	TRANSDUCER READING	BAROMETER (IN.)	DISCHARGE (GPM)	HEAD (FT)	DRAWDOWN (FT)	TEMP (°C)	SC (UNHOS@25°C)	pH (S.U.)
1506	~~44~~	-0.87	30.02	2.0	6.77	6.92	12.6	249	
1509	47								7.0
1512	50	-0.87		2.0	6.77	6.92			
1517	55	-0.89		2.0	6.74	6.95			
1518	56		30.01				13.0	250	7.0
1520	58	-0.91			6.73	6.96			
1525	63	-0.98			6.65	7.04			
1526	64	-1.0	30.02	2.0	6.62	7.07			7.0
1528	66			2.0			13.0	250.	6.9
1530	68	-1.01			6.61	7.08			
1533	71	-1.00	30.03		6.60	7.09			
1534	72	-0.99		2.0	6.63	7.06			
1535	73		30.03						
1536	74	-0.99			6.63	7.06			
1537	75	-0.98			6.64	7.05			
1540	78		30.04	2.0					
1541	79		30.05	2.0					
1542	80	-0.99	30.06		6.58	7.11			
1552	90	-1.04	30.05	2.0	6.55	7.14	14.5	252	7.0
1554	92	-1.07	30.04		6.51	7.18			
1558	96	-1.10	30.03		6.49	7.20			
1602	100	-1.10			6.49	7.20			
1604	102	-1.12	30.03		6.47	7.22			
1612	110	-1.14	30.02	2.0	6.45	7.24	13.5°	250	7.0
1615	113		30.05	2.0					
1618	116	-1.17			6.40	7.29			
1625	123	-1.20			6.36	7.33			
1632	130	-1.22	30.04	2.0	6.34	7.35	13.5°	251	6.9
1634	132	-1.24			6.32	7.37			
1636	134		30.03						
1642	140	-1.26	30.02		6.32	7.37			
1646	144		30.01						
1652	150	-1.29	30.01	2.0	6.30	7.39	14.0	258	6.8
1702	160		30.00						
1712	170	-1.33		2.0	6.26	7.43	13.5	260	6.9
1722	180	-1.39			6.19	7.50			
1732	190	-1.36	30.00	2.0	6.23	7.46			

AQUIFER TEST DATA
(Cont.)

WELL OBSERVED GS-01
(Data Reported On Table 1, m)

WELL TESTED GS-01

Project SEC CERCLA Personnel GROTBO/REDISKE TEST DATE 6-24-85

Date & hour 6/24/85	Time	TRANSDUCER READING	BAROMETER (IN)	DISCHARGE (GPM)	HEAD (FT)	DRAWDOWN (FT)	TEMP (°C)	SC (µMHOS @ 25°C)	pH (S.U.)
1746	204	-1.40	30.00	2.0	6.18	7.51	13.5°	252	7.1
1802	220	-1.43	30.01	2.0	6.14	7.55			
1822	240	-1.45	30.02	2.0	6.10	7.59	11.0	240	7.2
1842	260	-1.47	30.05		6.06	7.63			
1852	270	-1.50	30.06	2.0	6.00	7.69			
1900	278	-1.50			6.00	7.69			

AQUIFER TEST DATA

STILLER AND ASSOCIATES
CONSULTING HYDROLOGISTS · GEOLOGISTS · ENGINEERS

WELL OBSERVED (Data Reported on This Form) GS-01
WELL TESTED GS-01
TEST DATE 6-24-85

Project SBC CERCLA Personnel MG, TR

WELL DESCRIPTION

State MT County S.B. Location: T 3N R 8W Sec. 17 Tract CDA

Borehole Diam.(in) 6 Well Diam.(in) 4 Well Depth(ft) 14.5 Perforated Zone(s)(ft) 9.5 - 14.5

Desc. of MP TOP OF PVC Stick-up(ft) 1.9 SWL below MP(ft) _____ SWL below GS(ft) _____

Aquifer Name SBC ALLUVIUM Aquifer Description (Lithology, Thickness, Depth to Top) SAND, GRAVEL

TEST DESCRIPTION

Test Type: (Circle One)
1. Pumping Well Drawdown
2. Observation Well Drawdown
(3) Pumping Well Recovery
4. Observation Well Recovery
5. Bailer Recovery
6. Slug Injection or Removal
7. Hvorslev Test
8. Other (Specify) _____

Distance of Observation Well from Pumping Well(ft) 7 Pump hp. & type 0.5 H.P./SUB Pump Depth(ft) 13.5

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C) _____ Temp(°C) _____ Time _____

Avg. Discharge(gpm) 2.0 Test Duration(min) 17 Max WL Change(ft) 7.68 Transmissivity (gpd/ft) _____

Storativity _____ Hydraulic Conductivity(gpd/ft²) _____ Specific Capacity(gpm/ft of drawdown) _____

REMARKS _____

13.69

Date & hour	Time t'	t	t/t'	DUCER RDG.		BAROMETER RDG.	HEAD	RES. D.D.
6-24-85 1900	0	278	- ·	-1.54		30.07	5.95'	7.74'
1900.5	0.5	278.5	557	-0.07			7.62'	6.07'
1901	1	279	279	+1.11			8.97'	4.72'
1901.5	1.5	279.5	186	+2.09			10.08'	3.61'
1902	2	280	140	+2.87			10.97'	2.72'
1903	3	281	94	+3.92		30.07	12.17'	1.52'
1904	4	282	70.5	+4.53			12.86'	0.83'
1905	5	283	57	+4.87		30.08	13.24'	0.45'
1906	6	284	47	+5.04			13.43'	0.26'
1907	7	285	41	+5.13			13.53'	0.16'
1908.5	8.5	286.5	34	+5.19			13.60'	0.09'
1910	10	288	29	+5.20		30.09	13.61'	0.08'
1917	17	295	17	+5.27			13.63'	0.06'
6-25-85 1900				-1.03		30.07	3.13'	0.12'
1902				-1.01			3.18'	0.07'
1903.5				-0.99		30.07	3.23'	0.02'
1904.5				-0.98			3.25'	0.00'
1905.5				-0.97		30.08	3.26'	-.01'
1906.5				-0.97			3.26'	-.01'
1908				-0.96			3.28'	-.03'

3.25

AQUIFER TEST DATA

STILLER AND ASSOCIATES
CONSULTING HYDROLOGISTS · GEOLOGISTS · ENGINEERS

WELL OBSERVED (Data Reported on This Form) GS-03
WELL TESTED GS-03
TEST DATE 6/25/85

Project SBC CERCLA Personnel GROTBO/REDISKE

WELL DESCRIPTION

State MONTANA County SILVER BOW Location: T 3N R 9W Sec. 13 Tract DCB

Borehole Diam.(in) 6 Well Diam.(in) 4 Well Depth(ft) 25 Perforated Zone(s)(ft) 13'-23'

Desc. of MP BASE OF PLATFORM Stick-up(ft) _____ SWL below MP(ft) 6.52' SWL below GS(ft) _____

Aquifer Name SBC ALLUVIUM Aquifer Description (Lithology, Thickness, Depth to Top) SAND, GRAVEL

TEST DESCRIPTION

Test Type: (Circle One) (1.) Pumping Well Drawdown; 2. Observation Well Drawdown; 3. Pumping Well Recovery; 4. Observation Well Recovery; 5. Bailer Recovery; 6. Slug Injection or Removal; 7. Hvorslev Test; 8. Other (Specify) _____

Distance of Observation Well from Pumping Well(ft) _____ Pump hp. & type 1 h.p. sub Pump Depth(ft) 23 FT.

Water Quality Sample Taken? yes (no) Specific Conductance (μmhos/cm @ 25°C) _____ Temp(°C) _____ Time _____

Avg. Discharge(gpm) 17.1 Test Duration(min) 240 Max WL Change(ft) 5.55 Transmissivity (gpd/ft) _____

Storativity N/A Hydraulic Conductivity(gpd/ft²) _____ Specific Capacity(gpm/ft of drawdown) 17.1/5.6 = 3.05

REMARKS SBC STAGE @ 1½"; USED 50 p.s.i.; TRANSDUCER; ZERO OFFSET (-1.92); SENSITIVITY (1.0138)

Date & hour 6/25/85	Time	TRANSDUCER READING	BAROMETER (IN.)	DISCHARGE (GPM)	HEAD (FT.)	DRAWDOWN (FT)	TEMP. (°C)	SC (UMHOS@ 25°C)	PH (S.U.)
1232	0	+9.56	30.12		18.53				
1232.5	0.5	6.96			15.57	2.96			
1233	1.0	6.45		15.9	14.99	3.54			
1233.5	1.5	6.12		16.5	14.61	3.92			
1234	2	5.91		17.1	14.37	4.16			
1235	3	5.65			14.08	4.45			
1236	4	5.48		16.8	13.88	4.65			
1237	5	5.37		17.1	13.76	4.77			
1239	7	5.23		17.4	13.60	4.93	13.0	330	7.0
1242	10	5.08		17.4	13.43	5.10			
1247	15	4.96		17.1	13.29	5.24			
1252	20	4.89	30.09	16.8	13.26	5.27	11.5	323	7.4
1257	25	4.86		17.1	13.22	5.31			
1302	30	4.82	30.09	17.1	13.18	5.35			
1312	40	4.77		17.1	13.12	5.41			
1332	60	4.71	30.10	17.7	13.03	5.50	11.5	302	7.5
1352	80	4.71	30.12	17.1	13.01	5.52			
1412	100	4.69	30.12	17.1	12.99	5.54	11.0	311	7.5
1432	120	4.66	30.12	17.1	12.95	5.58			
1502	150	4.69	30.16	17.7	12.94	5.59	10.5	311	7.5
1532	180	4.67	30.18	17.4	12.90	5.63	10.0	309	7.5
1602	210	4.74	30.18	16.8	12.98	5.55	10.0	320	7.5
1632	240	4.74	30.18	17.1	12.98	5.55	10.0	314	

AQUIFER TEST DATA

STILLER AND ASSOCIATES
CONSULTING HYDROLOGISTS GEOLOGISTS · ENGINEERS

WELL OBSERVED (Data Reported on This Form) GS-03
WELL TESTED GS-03
TEST DATE 6/25/85

Project SBC CERCLA Personnel GROTBO/REDISKE

WELL DESCRIPTION

State MONTANA County SILVER BOW Location: T 3N R 9W Sec. 13 Tract DCB

Borehole Diam.(in) 6 Well Diam.(in) 4 Well Depth(ft) 25 Perforated Zone(s)(ft) 13'-23'

Desc. of MP BASE OF PLATFORM Stick-up(ft) ____ SWL below MP(ft) 6.52' SWL below GS(ft) ____

Aquifer Name SBC ALLUVIUM Aquifer Description (Lithology, Thickness, Depth to Top) SAND, GRAVEL

TEST DESCRIPTION

Test Type: (Circle One)
1. Pumping Well Drawdown
2. Observation Well Drawdown
3. Pumping Well Recovery
4. Observation Well Recovery
5. Bailer Recovery
6. Slug Injection or Removal
7. Hvorslev Test
8. Other (Specify) ____

Distance of Observation Well from Pumping Well(ft) ____ Pump hp. & type ____ Pump Depth(ft) ____

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C) ____ Temp(°C) ____ Time ____

Avg. Discharge(gpm) ____ Test Duration(min) 56 Max WL Change(ft) 5.50 Transmissivity (gpd/ft) ____

Storativity ____ Hydraulic Conductivity(gpd/ft²) ____ Specific Capacity(gpm/ft of drawdown) ____

REMARKS SAME

Date & hour 6/25/85	Time T'	TIME (T)	T/T₁	TRANSDUCER READING	BAROMETER (IN.)	HEAD (FT.)	RES. DRAWDOWN	FT.
1632	0	240	·	4.74	30.18	12.98	5.55	
1632.5	0.5	2405	481	7.40		16.01	2.52	
1633	1.0	241	241	7.94		16.62	1.91	
1633.5	1.5	241.5	161	8.23		16.95	1.58	
1634	2	242	121	8.42		17.17	1.36	
1635	3	243	81	8.65		17.43	1.10	
1636	4	244	61	8.80		17.60	0.93	
1637	5	245	49	8.90	30.18	17.72	0.81	
1639	7	247	35	9.05		17.89	0.64	
1642	10	250	25	9.18		18.04	0.49	
1647	15	255	17	9.31		18.18	0.35	
1652	20	260	13	9.39	30.19	18.26	0.27	
1702	30	270	9	9.47	30.20	18.34	0.19	
1712	40	280	7	9.52		18.40	0.13	
1728	56	296	5	9.59		18.48	0.05	
				V-147				

AQUIFER TEST DAIA

STILLER AND ASSOCIATES
CONSULTING HYDROLOGISTS · GEOLOGISTS · ENGINEERS

WELL OBSERVED (Data Reported on This Form) GS-10A, 10B
WELL TESTED GS-07
Project SBC CERELLA MI Personnel P. DUNLAVY, T. REDISHE TEST DATE 1-14-86

WELL DESCRIPTION

State MT County SILVER BOW Location: T 3N R 7W Sec. 19 Tract AAC
Borehole Diam.(in) 6 Well Diam.(in) 4 Well Depth(ft) 160 Perforated Zone(s)(ft) 130-160
Desc. of MP TOP OF STEEL Stick-up(ft) 2.2 SWL below MP(ft) 25.13 SWL below GS(ft) 22.93
Aquifer Name SBC ALLUVIUM Aquifer Description (Lithology, Thickness, Depth to Top) SAND, GRAVEL

TEST DESCRIPTION

Test Type: (Circle One) (1) Pumping Well Drawdown; 2. Observation Well Drawdown; 3. Pumping Well Recovery; 4. Observation Well Recovery; 5. Bailer Recovery; 6. Slug Injection or Removal; 7. Hvorslev Test; 8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) (A-12.8)(B-12.5) Pump hp. & type 5 H.P. SUB. Pump Depth(ft) 143
Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C)_____ Temp(°C)_____ Time_____
Avg. Discharge(gpm) 20.5 Test Duration(min) 300 Max WL Change(ft) 112.5? Transmissivity (gpd/ft)_____
Storativity_____ Hydraulic Conductivity(gpd/ft²)_____ Specific Capacity(gpm/ft of drawdown)_____
REMARKS Q MEASURED WITH ORIFICE BUCKET, 2 HOLES ODEN, 11" OF HEAD

Date & hour	Time	DEPTH TO H_2O (FT) GS-07	S	DEPTH TO H_2O GS-10A		DEPTH TO H_2O GS-10B		BAR
1-14-86 0850		25.13		21.80		19.95		
0900	0	25.13		21.80		19.95		
09005	.5	56.00	30.87					
0901	1	81.92	56.79					
0902	2	82.19	57.06	21.80				
0903	3					19.95		
09035	3.5	92 70	67.57					
0904	4	95.89	70.76					
0905	5	100.40	75.27					
0906	6	102.98	77.85			19.95		
0907	7	105.52	80.39	21.80				
0908	8	107.25	82.12					
0909	9	105.62	83.49					28.21
0910	10	109.78	84.65					
0911	11			21.80		19.90		
0912	12	112.10	86.97					
0914	14	113.18	88.05			19.90		
0915	15			21.80				
0916	16	114.42	89.29			19.0		
0918	18			21.80		19.9		
0920	20	116.41	91.28					
0922	22			21.80		19.9		
0924	24	117.45	92.32	21.80		19.9		28.21
0928	28	118.65	93.52	S.C. =	2080	pH = 5.6		

AQUIFER TEST DATA
(Cont.)

WELL OBSERVED GS-101 103
(Data Reported in this row)

WELL TESTED GS-07

Project SBC - CERCLA AI Personnel P. Danlavy, T. Rubiste TEST DATE 1-14-86

Date & hour	Time min	DEPTH TO H_2O GS07	S (FT)	DEPTH TO H_2O GS101A		DEPTH TO H_2O GS103		BAT
0930	30	119.18	94.05	21.90		19.90		
0932	32	119.85	94.72	21.0				
0934	34	120.32	95.19					
0935	35			21.80		19.90		
0938	38	120.83	95.70					
0940	40			21.90				
0942	42	121.21	96.08			19.90		
0945	45			21.95		19.90		
0946	46	121.59	96.46					
0950	50	124.4	94.27 corrected	pH 7				
0951	51			21.96		19.90		
0955	55	126.45	101.32					
0959	59			21.95		19.93		
1000	60	127.32	102.19					
1005	65	127.86	102.73					28.19
1009	69			22.00		19.90		28.20
1010	70	128.49	103.36					
1015	75	128.67	103.54					
1018	78			22.00		19.88		28.20
1020	80	129.20	104.07					
1023	83			22.05		19.90		
1025	85	129.25	SC 104.12 2720					28.16
1030	90	129.27	104.14					
1033	93			22.00		19.50		
1035	95	129.95	104.82					28.15
1037	97			22.10		19.90		28.15
1040	100	130.10	104.97					28.14
1050	110	130.58	105.45					
1054	114			22.10		17.95		28.16
1055	115	130.56	SC 105.43 2950		pH 5.7			
1100	120	131.26	106.13					
1105	125							28.16
1106	126			22.10		19.90		
1110	130	131.23	106.10					
1115	135			22.10		19.90		
1120	140	131.57	106.44					
1125	145	SC 2895	pH 5.8	22.12				

AQUIFER TEST DATA

WELL OBSERVED (Data Reported on This Form) GS-10H 10B

WELL TESTED GS-07

Project SRC - CERCLA RI Personnel P. Dunlap, T. Ridgley TEST DATE 1-14-86

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 7W Sec. 19 Tract A.N.C.

Borehole Diam.(in) 6 Well Diam.(in) 4 Well Depth(ft) 160 Perforated Zone(s)(ft) 130-160

Desc. of MP 6" Steel Casing Stick-up(ft) +2.2 SWL below MP(ft) 25.13 SWL below GS(ft) 22.93

Aquifer Name SRC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand/Gravel

TEST DESCRIPTION

Test Type: (Circle One) (1.) Pumping Well Drawdown (3.) Pumping Well Recovery 5. Bailer Recovery 7. Hvorslev Test
2. Observation Well Drawdown 4. Observation Well Recovery 6. Slug Injection or Removal 8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) (A) 12.8/B 12.5 Pump hp. & type 5 hp Pump Depth(ft) 143

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C)____ Temp(°C)____ Time____

Avg. Discharge(gpm) 20.5 Test Duration(min) 300 Max WL Change(ft) 112.59 Transmissivity (gpd/ft)____

Storativity____ Hydraulic Conductivity(gpd/ft²)____ Specific Capacity(gpm/ft of drawdown)____

REMARKS 2 gpm 11" on surface Bucket

Date & hour	Time min	DEPTH TO H2O GS07 (BF)	S	DEPTH TO H2O GS10H(ft)		DEPTH TO H2O GS10B(ft)		
1130	150	182.11	100.98 Well bore flux ination					Bac 28.15
1135	155			22.19		19.90		
1140	160	131.28	106.15					
1145	Sand S/ag - Turbidity increase pump -				Mica Sand - -		almost stopped	
1150	170	132.30	107.17					
1151	171			22.15		19.90		28.13+
1154	174	134.1	108.97					
1157	177			22.15		19.90		28.12
1200	180	134.74	109.61					
1210	190	135.00	109.87					
1212	192			22.20		19.92		28.14
1220	200	135.14	110.01					
1235	215	136.32	111.19					
1240	220	136.32	111.19	22.15		19.90		28.14
1250	230	136.68	111.55 Turbidity C./ering					
13.00	240	136.72	111.77	22.06		19.90		
1310	250	136.67	111.54	22.10		19.90		28.14+
1320	260	137.00	111.83 S 3/40 PH 6.7					
1330	270	137.07	111.94	22.22		19.91		28.14+
1340	280	136.95	111.82					
1350	290	137.65	112.42	22.22				
1355	295	137.55	112.42					
1359	299	137.72	112.59					
1400	pump	S.B.F						

AQUIFER TEST DATA

STILLER AND ASSOCIATES
CONSULTING HYDROLOGISTS · GEOLOGISTS · ENGINEERS

WELL OBSERVED (Data Reported on This Form) GS-10A, GS-10B
WELL TESTED GS-07
TEST DATE 1-14-80

Project SBL - CERCLA AT Personnel P. DUNLAVY, T. MEDINSKE

WELL DESCRIPTION

State MT County SILVER BOW Location: T 3N R 7W Sec. 19 Tract AAC

Borehole Diam.(in) 6 Well Diam.(in) 4 Well Depth(ft) 160 Perforated Zone(s)(ft) 130-160

Desc. of MP TOP OF STEEL Stick-up(ft) 2.2 SWL below MP(ft) 25.13 SWL below GS(ft) 22.93

Aquifer Name SBL ALLUVIUM Aquifer Description (Lithology, Thickness, Depth to Top) SAND, GRAVEL

TEST DESCRIPTION

Test Type: (Circle One)
1. Pumping Well Drawdown
(3) Pumping Well Recovery
5. Bailer Recovery
7. Hvorslev Test
2. Observation Well Drawdown
4. Observation Well Recovery
6. Slug Injection or Removal
8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) (A) 12.8 / B 12.5 Pump hp. & type 5 HP Pump Depth(ft) 143

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C)_____ Temp(°C)_____ Time_____

Avg. Discharge(gpm) 20.5 Test Duration(min) 105 Max WL Change(ft) 12.05 Transmissivity (gpd/ft)_____

Storativity_____ Hydraulic Conductivity(gpd/ft²)_____ Specific Capacity(gpm/ft of drawdown)_____

REMARKS DEPTH TO H₂O

Date & hour	Time	t'	GS-07	t/t'	s'			
1-14-80 1401	301	1	92.15	301	67.02			
1402	302	2	76.82	151	51.69			
1403	303	3	63.62	101	38.49			
1404	304	4	55.72	76	30.59			
1405	305	5	49.90	61	24.77			
1406	306	6	45.50	51	20.37			
1407	307	7	42.16	43.9	17.03			
1408	308	8	39.59	38.5	14.46			
1409	309	9						
1410	310	10	36.00	31	10.87			
1411	311	11	34.78	28.3	9.65			
1413	313	13	33.06	24.1	7.93			
1416	316	16	31.40	19.75	6.27			
1420	320	20	29.85	14	4.72			
1425	325	25	28.70	13	3.57			
1430	330	30	11	11	2.86			
1500	400	60	6.7	6.7	1.19			
1545	445	105	4.2	4.2	.54			

AQUIFER TEST DATA

WELL OBSERVED (Data Reported on This Form) GS-10H 10B
WELL TESTED GS-07
TEST DATE 1-14-86

Project SBC - CERCLA RI Personnel P. Dunlap, T. Ridgley

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 7W Sec. 19 Tract A.N.C

Borehole Diam.(in) 6 Well Diam.(in) 4 Well Depth(ft) 160 Perforated Zone(s)(ft) 130-160

Desc. of MP 6" Steel Casing Stick-up(ft) +0.2 SWL below MP(ft) 25.13 SWL below GS(ft) 22.93

Aquifer Name SBC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand/Gravel

TEST DESCRIPTION

Test Type: (Circle One) (1.) Pumping Well Drawdown (3) Pumping Well Recovery 5. Bailer Recovery 7. Hvorslev Test
2. Observation Well Drawdown 4. Observation Well Recovery 6. Slug Injection or Removal 8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) (D) 12.8/B12.5 Pump hp. & type 5 hp Pump Depth(ft) 143

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C)____ Temp(°C)____ Time____

Avg. Discharge(gpm) 20.5 Test Duration(min) 300 Max WL Change(ft) 112.59 Transmissivity (gpd/ft)____

Storativity____ Hydraulic Conductivity(gpd/ft²)____ Specific Capacity(gpm/ft of drawdown)____

REMARKS Open 11" cr Orifice Bucket

Date & hour	Time min	DEPTH TO H2O (GS07) (ft)	S	DEPTH TO H2O (GS10H) (ft)		DEPTH TO H2O (GS10B) (ft)		BRC
1130	150	132.11	106.98 Well Bore Elevation					28.15
1135	155			22.19		19.90		
1140	160	131.28	106.15					
1145	Sand S	lug - Turbidity	increase	Mica Sand - -		Almost	stopped	
	pump	-						
1150	170	132.30	107.17					
1151	171			22.15		19.90		28.13+
1154	174	134.1	108.97					
1157	177			22.15		19.90		25.12
1200	180	134.74	109.61					
1210	190	135.00	109.87					
1212	192			22.20		19.92		28.14
1220	200	135.14	110.01					
1235	215	136.32	111.19					
1240	220	136.32	111.19	22.15		19.90		28.14
1250	230	136.68	111.55 Turbidity Clearing					
1300	240	136.92	111.79	22.06		19.90		
1310	250	136.67	111.54	22.10		19.90		28.14+
1320	260	137.00	111.87 S 3140 pH 6.7					
1330	270	137.07	111.94	22.22		19.91		28.14+
1340	280	136.95	111.82					
1350	290	137.55	112.42	22.22				
1355	295	137.55	112.42					
1359	299		112.59					
1400	pump		DTB					

AQUIFER TEST DATA
(Cont.)

WELL OBSERVED G.S 10A/10B
(Data Reported on this Form)

WELL TESTED G.S. 07

Project SBC

Personnel T Ridinke, P Dunlavy

TEST DATE 1-14-86

Date & hour	Time min	Time since pump started t (min)	GS 07	t/t'	s'			
Recovery								
		0	137.72					
1400	300	1	92.15	301	67.02			
1402	302	2	76.82	151	51.69			
1403	303	3	63.62	101	38.49			
1404	304	4	55.72	76	30.59			
1405	305	5	49.90	61	24.77			
1406	306	6	45.50	51	20.37			
1407	307	7	42.16	43.9	17.03			
1408	308	8	39.54	38.5	14.46			
1409	309	9		34.3				
1410	310	10	36.00	31	10.87			
1411	311	11	34.78	28.3	9.65			
1413	313	13	33.06	24.1	7.93			
1416	316	16	31.40	19.75	6.27			
1420	320	20	29.85	16	4.72			
1425	325	25	28.70	13	3.57			
1430	330	30	27.94	11	2.80			
1500	400	60	26.32	6.7	1.19			
1545	445	105	25.67	4.2	.54			

Sheet 1 / Page 1

AQUIFER TEST DATA

WELL OBSERVED (Data Reported on This Form) GS-10A, 10B

WELL TESTED GS-07

Project SRC - Alluvium Personnel T Rediske, P Dunlavy TEST DATE 1-14-86

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 7W Sec. 19 Tract HHC

Borehole Diam.(in) 6 Well Diam.(in) 4 Well Depth(ft) 160 Perforated Zone(s)(ft) 130 - 160

Desc. of MP 6" steel casing Stick-up(ft) +2.2 SWL below MP(ft) 25.13 SWL below GS(ft) 22.93

Aquifer Name SRC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand, Gravel

TEST DESCRIPTION

Test Type: (Circle One)
(1.) Pumping Well Drawdown
(3.) Pumping Well Recovery
5. Bailer Recovery
7. Hvorslev Test
2. Observation Well Drawdown
4. Observation Well Recovery
6. Slug Injection or Removal
8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) A 12.8 / B 12.5 Pump hp. & type 5hp Pump Depth(ft) 143

Water Quality Sample Taken? yes no Specific Conductance (µmhos/cm @ 25°C) Temp(°C) Time

Avg. Discharge(gpm) 20.5 Test Duration(min) 300 Max WL Change(ft) 12.59 Transmissivity (gpd/ft)

Storativity Hydraulic Conductivity(gpd/ft²) Specific Capacity(gpm/ft of drawdown)

REMARKS 2 open - 11" on Orface Bucket

S.W.L. S.W.L. GS-07 S.W.L.

Date & hour	Time min	GS07 (ft)		10A (ft)	S	10B (ft)		Barometric
1-14-86 0850		25.13		21.80		19.95		
0900	000	25.13						
09005	000.5	56.00			30.87			
0901	1	81.92			56.79			
09.02	2	82.14		21.80	57.06			
09.03	3					19.95		
09 095	3.5	92.70			67.57			
0904	4	95.89			70.76			
0905	5	100.40			75.27			
0906	6	102.98			77.85	19.95		
0907	7	105.52		21.80	80.37			
0908	8	107.25			82.12			
0909	9	108.62			83.49			28.21
0910	10	109.78			84.65			
0911	11			21.80		19.90		
0912	12	112.10			86.97			
0914	14	113.18			88.05	19.90		
0915	15			21.80				
0916	16	114.42			89.29	19.0		
0918	18			21.80		19.9		
0920	20	116.41			91.28			
0922	22			21.80		19.9		
0924	24	117.45		2180	92.32	19.9		28.21
0928	28	118.65	S.C. 2680, PH 5.6		93.52			

Sheet 1 of page 2

AQUIFER TEST DATA
(Cont.)

WELL OBSERVED GS-10A 10B
(Data Reported on this Form)

WELL TESTED GS-07

Project SBC - CERCLA AT Personnel P. Danley, T. Redicke TEST DATE 1-14-86

Date & hour	Time min	DEPTH TO H2O GS07	S (FT)	DEPTH TO H2O GS10A		DEPTH TO H2O GS10B		BAT
0930	30	119.18	94.05	21.90		19.90		
0932	32	119.85	94.72	21.0				
0934	34	120.32	95.19					
0935	35			21.80		19.90		
0938	38	120.83	95.70					
0940	40			21.90				
0942	42	121.21	96.08			19.90		
0945	45			21.95		19.90		
0946	46	121.59	96.46					
0950	50	124.4	94.27 (extrap)	07 Ci				
0951	51			21.96		19.90		
0955	55	126.45	101.32					
0959	59			21.95		19.93		
1000	60	127.32	102.19					
1005	65	127.86	102.73					28.19
1009	69			22.00		19.90		28.20
1010	70	128.49	103.36					
1015	75	128.67	103.54					
1018	78			22.00		19.88		28.20
1020	80	129.20	104.07					
1023	83			22.05		19.90		
1025	85	129.25	SC 104.12 2720					28.16
1030	90	129.27	104.14					
1033	93			22.00		19.50		
1035	95	129.95	104.82					28.15
1037	97			22.10		19.90		28.15
1040	100	130.10	104.97					28.14
1050	110	130.58	105.45					
1054	114			22.10		19.95		28.16
1055	115	130.56	SC 105.43 2950		pH 5.7			
1100	120	131.26	106.13					
1105	125							28.16
1106	126			22.10		19.90		
1110	130	131.23	106.10					
1115	135			22.10		19.90		
1120	140	131.57	106.44					
1125	145	SC 2895	pH 5.8	22.12				

AQUIFER TEST DATA

WELL OBSERVED (Data Recorded on Data Form) GS-09, GS 11

WELL TESTED GS-08

Project SBC CERCLA Personnel T. Redisky, P. Daniels TEST DATE 1-15-96

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 7W Sec. 19 Tract CBAD

Borehole Diam.(in) 6" Well Diam.(in) 4" Well Depth(ft) 145.5 Perforated Zone(s)(ft) 125.5 - 145.5

Desc. of MP Top 6" steel casing Stick-up(ft) 1.5 SWL below MP(ft) 11.30 SWL below GS(ft) 9.8

Aquifer Name SBC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand & Gravel

TEST DESCRIPTION

Test Type: (Circle One) 1. Pumping Well Drawdown (3) Pumping Well Recovery 5. Bailer Recovery 7. Hvorslev Test

2. Observation Well Drawdown 4. Observation Well Recovery GS-11 - 8.7' 6. Slug Injection or Removal 8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) GS-09 9.2' Pump hp. & type GF Pump Depth(ft) 23 from MP

Water Quality Sample Taken? yes no Specific Conductance (µmhos/cm @ 25°C)____ Temp(°C)____ Time____

Avg. Discharge(gpm) 11.6 Test Duration(min) 60 Max WL Change(ft) 47.23 Transmissivity (gpd/ft)____

Storativity____ Hydraulic Conductivity(gpd/ft²)____ Specific Capacity(gpm/ft of drawdown)____

REMARKS____

Date & hour	Time min		GS-08	s	t/t'			
1-15-96 1812	372	12						
	373	13	15.74	4.06	28.7			
	374	14	15.16	3.48	26.7			
	375	15	14.75	3.07	25			
	378	18	13.90	2.22	21			
1820	380	20	13.55	1.87	19			
	382	22	13.34	1.66	17.4			
	384	24	13.17	1.49	16			
	385	25	13.10	1.42	15.4			
1830	390	30	12.93	1.25	13			
1838	398	38	12.70	1.02	10.5			
1900	420	60	12.85	1.87	7			

AQUIFER TEST DATA
(Cont.)

WELL OBSERVED GS-09, GS 11
(Data reported on this page)

WELL TESTED GS-08

Project SBC Circle Personnel TKubista, P Harding TEST DATE 1-15-86

Date & hour 1-15-86	Time Min	GS-08 ft			GS-09		GS 11	BAR
1335	95	91.55	79.87					
1340	100	92.32	80.64		10.36		11.28	29.63 -
1350	110	93.63	81.95					29.62
1408	128	93.03	81.35		10.36		11.28	
1414	134	93.03	81.35					
1420	140	93.50	81.82					29.62
	143				10.38		11.25	
	145	93.82	82.14					
1430	150	94.01	82.33					
	158				10.35		11.25	29.62
1440	160	94.27	82.59					
1510	190	93.12	81.44 gerwah- shut off / Adjusted Flow					
	192				10.36		11.27	29.62
1520	200	93.38	81.70					
1530	210	93.50	81.82 2c 1240					
1545	225	93.60	81.92		10.38			
1555	235	94.04	82.36					
1600	240	94.23	82.55		10.42		11.26	29.62
1610	250	94.28	82.60					
1630	270	94.57	82.89 2c 1270		10.42		11.28	
1645	285	95.16	83.48		10.42		11.28	
1700	300	95.18	83.50					29.65
1720	320	95.72	84.04					
1740	340	95.46	83.78		10.46		11.28	
1754	354	94.94	83.31	1755 1754	10.48 10.44		11.28	
1800	360	94.79	83.36 Pump off				11.28	
		RECOVERY		S	t/t'			
1801	361	1	60.08	48.4	361			
	362	2	52.70	41.02	181			
	363	3	43.27	31.59	121			
	364	4	36.95	25.27	91			
	365	5	31.30	19.42	73			
	366	6	27.53	15.85	61			
	367	7	24.48	12.8	52.4			
	368	8	21.81	10.13	46			
	369	9	20.00	8.32	41			
1810	370	10	18.50	6.82	37			
	371	11	17.37	5.49	33.7			

Pump off

Sheet 1 of 2 pages -

AQUIFER TEST DATA

WELL OBSERVED (Data Reported on This Form) GS-09, GS 11

WELL TESTED GS-08

Project SBC CERCLA Personnel T Redisko P Donlay TEST DATE 1-15-86

WELL DESCRIPTION

State MT County S. Lwr Bow Location: T 3N R 7W Sec. 19 Tract CRAD

Borehole Diam.(in) 6" Well Diam.(in) 4 Well Depth(ft) 1455 Perforated Zone(s)(ft) 1255 - 1455

Desc. of MP Top of 6" steel casing Stick-up(ft) 1.5 SWL below MP(ft) 11.30 SWL below GS(ft) 9.8

Aquifer Name SBC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand & Gravel

TEST DESCRIPTION

Test Type: (Circle One)
(1) Pumping Well Drawdown
2. Observation Well Drawdown
3 Pumping Well Recovery
4. Observation Well Recovery
5. Bailer Recovery
6. Slug Injection or Removal
7. Hvorslev Test
8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) GS-11 - 8.7', GS-09 - 9.2' Pump hp. & type GE Pump Depth(ft) 123 - from M,

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C)____ Temp(°C)____ Time____

Avg. Discharge(gpm) 11.6 Test Duration(min) 360 Max WL Change(ft) 83.31 Transmissivity (gpd/ft)____

Storativity____ Hydraulic Conductivity(gpd/ft²)____ Specific Capacity(gpm/ft of drawdown)____

REMARKS

Date & hour	Time Min	GS-08 (ft)	DRAWDOWN S	GS-09 (ft)		GS-11 (ft)		Bar.
1-15-86 1222	22	86.68	75.00					
	24	86.98	75.30	10.38		11.28		
	26	87.46	75.78					
	28	87.77	76.09					
1230	30	87.93	76.25					
	32			10.38		11.27		
	34	88.17	76.49					
	38	88.70	77.02					
	39			10.38		11.27		
1242	42	89.01	77.33					29.66
	46	89.25	77.57					
	47			10.38		11.28		
1250	50	90.16	78.48					
	54	92.23	80.55					
	55			10.42		11.28		
	58	90.09	78.41					29.63+
1302	62	91.27	79.59	10.42		11.28		29.63-
	66	91.38	$\Delta s^{79.70} = 13$	10				
	70	91.42	79.74	10.42		11.28		
1318	78	91.44	79.76					29.62
1321	81			10.38				
	84	92.37	80.69					
	88	91.36	79.68					
	92	92.27	80.59	10.38		11.28		

AQUIFER TEST DATA
(Cont.)

WELL OBSERVED GS-09 GS-11
(Data reported on this form)

WELL TESTED GS-08

Project SBC-CERCLA Personnel TRedwine, PDunlap TEST DATE 1-15-86

Date & hour 1-15-86	Time min	GS-08 (ft)	Q 12 gpm		GS-09 (ft)		GS-11 (ft)	Bar
0954	24	74.59	63.27					
	25				10.39		11.28	
	26	74.59	Fluctuating		Q			
	28	74.59	63.27					
1000	30	73.71	63.27					
	31				10.41		11.28	
	32	74.61	63.27 Stable		Q			
	33 0						11.27	
1004	34	74.74	63.62		10.40			
	36	75.15	63.83					
	37				10.41			
	38	75.32	64.00				11.27	
1010	40	75.32	64.00					
	41						11.27	29.61
1015	45	75.55	64.23					
	46				10.42		11.28	29.62
1020	50	75.66	64.34					
		Stop test & increased to 13 gpm						
1-15-86	(min)	GS-08	Q 13 gpm		GS-09		GS-11	Bar
1200	0	11.68			10.40		11.29	29.64
	.5	24.37	17.69					
	1	36.59	24.91					
	2	55.0	43.32 Barometric		14.25 / 14.50			
	3	62.13	50.45					
	4	67.45	55.77					
	5	70.78	59.10					
	6	73.48	61.80					
	7	75.89	64.21					
	8	77.70	66.02		10.35			
	9	79.51	67.83				11.24	
1210	10	80.45	68.77					
	11	81.38	69.70		10.35			
	12	82.00	70.32				11.24	
	14	83.21	71.53					
	16	83.90	72.22		10.37		11.26	
1218	18	85.40	73.72					
	20	86.26	74.58					

AQUIFER TEST DATA

WELL OBSERVED (Data Reported on this Form) GS09 & GS11

WELL TESTED GS-08

Project SBC - CeRCLA Personnel TRedlich, LDunlavy TEST DATE 1-15-86

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 7W Sec. 19 Tract CBAD

Borehole Diam.(in) 6" Well Diam.(in) 4 Well Depth(ft) 145.5 Perforated Zone(s)(ft) 125.5 - 145.5

Desc. of MP Top of 6" steel Stick-up(ft) 1.5 SWL below MP(ft) 11.32 11/15/85 11.30 11/14/85 SWL below GS(ft) 9.8

Aquifer Name SBC-Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand & Gravel

TEST DESCRIPTION

Test Type: (Circle One) (1.) Pumping Well Drawdown; 2. Observation Well Drawdown; 3. Pumping Well Recovery; 4. Observation Well Recovery; 5. Bailer Recovery; 6. Slug Injection or Removal; 7. Hvorslev Test; 8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) GS-11 - 8.8' GS-09 - 9.2' Pump hp. & type GF 5HP Pump Depth(ft) 123' from T.

Water Quality Sample Taken? yes no (1st Test / Final) Specific Conductance (μmhos/cm @ 25°C)____ Temp(°C)____ Time____

Avg. Discharge(gpm) 10.75 / 11.6 Test Duration(min) 360 Max WL Change(ft) 83.31 Transmissivity (gpd/ft)____

Storativity____ Hydraulic Conductivity(gpd/ft²)____ Specific Capacity(gpm/ft of drawdown)____

REMARKS 1st Test Pump rate 10.75 gpm / 2nd Test 11.6

Date & hour	Time min	GS 08	Q = 10.75 gpm		GS 09 (ft)		GS 11 (ft)	Barom.
1700 1-14-86		11.30	.5		10.43		11.13	29.60
1-15-86 0930	0	11.32			10.44		11.28	
0931	1	47.10	35.78					
	2	51.21	39.89					
	3	56.37	45.05					
	4	58.94	47.62					
	5	62.20	50.88					
	6	64.55	53.23					
	7	63.72	52.40		10.38		11.25	
	8	69.15	57.83					
	9	65.77	54.45		10.35		11.26	
0940	10	68.15	56.83					
	11.5	70.37	59.05					
	13.0	71.59	60.27		10.35			
	13.5						11.24	
	14.	72.43	61.11					
0945	15	73.12	61.80					
	16	73.53	62.21					
	17	73.86	62.54					
	18	72.85	61.53 Q					
	19	72.51	61.19					
0950	20	72.14	60.82					
	22	73.58	62.26		10.29		11.28	

AQUIFER TEST DATA

WELL OBSERVED (Data Reported on This Form) GS-09, GS 11

WELL TESTED GS-08

Project SBC CERCLA Personnel TRidista, PDanley TEST DATE 1-15-86

WELL DESCRIPTION

State NM County Silver Bow Location: T 3N R 7W Sec. 19 Tract CBAD

Borehole Diam.(in) 6" Well Diam.(in) 4" Well Depth(ft) 145.5 Perforated Zone(s)(ft) 125.5 - 145.5

Desc. of MP Top of 6" steel Casing Stick-up(ft) 1.5 SWL below MP(ft) 11.30 SWL below GS(ft) 9.8

Aquifer Name SBC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand & Gravel

TEST DESCRIPTION

Test Type: (Circle One)
1. Pumping Well Drawdown
(3.) Pumping Well Recovery
5. Bailer Recovery
7. Hvorslev Test
2. Observation Well Drawdown
4. Observation Well Recovery
6. Slug Injection or Removal
8. Other (Specify)_____

Distance of Observation Well from Pumping Well(ft) GS-11 - 8.7' GS-09 9.2' Pump hp. & type GF Pump Depth(ft) 123 from mp

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C)_____ Temp(°C)_____ Time_____

Avg. Discharge(gpm) 11.6 Test Duration(min) 60 Max WL Change(ft) 47.23 Transmissivity (gpd/ft)_____

Storativity_____ Hydraulic Conductivity(gpd/ft²)_____ Specific Capacity(gpm/ft of drawdown)_____

REMARKS_____

Date & hour	Time		GS-08	s'	s/s'			
1-15 86 1812	372	12						
	373	13	15.74	4.06	28.7			
	374	14	15.16	3.48	26.7			
	375	15	14.75	3.07	25			
	378	18	13.90	2.22	21			
1820	380	20	13.55	1.87	19			
	382	22	13.34	1.66	17.4			
	384	24	13.17	1.49	16			
	385	25	13.10	1.42	15.4			
1830	390	30	12.93	1.25	13			
1838	398	38	12.70	1.02	10.5			
1900	420	60	12.85	1.87	7			

AQUIFER TEST DATA

WELL OBSERVED (Data Reported on This Form) GS09 & GS11

WELL TESTED GS-08

Project SRC - CeRCLA Personnel TRedeske, P. Dunlavey TEST DATE 1-15-86

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 7E Sec. 19 Tract CRHD

Borehole Diam.(in) 6" Well Diam.(in) 4 Well Depth(ft) 145.5 Perforated Zone(s)(ft) 125.5 - 145.5

Desc. of MP Top of 6" steel Stick-up(ft) 1.5 SWL below MP(ft) 11.32 11/15/86 SWL below GS(ft) 9.8

Aquifer Name SRC-Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand & Gravel

TEST DESCRIPTION

Test Type: (Circle One)
(1.) Pumping Well Drawdown
2. Observation Well Drawdown
3. Pumping Well Recovery
4. Observation Well Recovery
5. Bailer Recovery
6. Slug Injection or Removal
7. Hvorslev Test
8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) GS-11 - 8.7' GS-09 - 9.2' Pump hp. & type GF 5HP Pump Depth(ft) 123' from MP

Water Quality Sample Taken? yes no (1st Test / Final) Specific Conductance (μmhos/cm @ 25°C)_____ Temp(°C)_____ Time_____

Avg. Discharge(gpm) 10.25 / 11.4 Test Duration(min) 360 Max WL Change(ft) 83.31 Transmissivity (gpd/ft)_____

Storativity_____ Hydraulic Conductivity(gpd/ft²)_____ Specific Capacity(gpm/ft of drawdown)_____

REMARKS 1st Test Pump rate 10.75 gpm / 2nd Test 11.6

Time = hour	Time Min	GS 08	Q = 10.25 gpm		GS 09 (ft)		GS 11 (ft)	Barometer
1700 1-14-86		11.30	S		10.43		11.13	29.60
1-15-86 0930	0	11.32			10.44		11.28	
0931	1	47.10	35.78					
	2	51.21	39.84					
	3	56.37	45.05					
	4	58.94	47.62					
	5	62.70	50.88					
	6	64.55	53.23					
	7	63.72	52.40		10.38		11.25	
	8	69.15	57.83					
	9	65.77	54.45		10.35		11.26	
0940	10	68.15	56.83					
	11.5	70.37	59.05					
	13.0	71.59	60.27		10.35			
	13.5						11.24	
	14.	72.43	61.11					
0945	15	73.12	61.80					
	16	73.53	62.21					
	17	73.86	62.54					
	18	72.85	61.53 Q					
	19	72.51	61.19					
0950	20	72.14	60.82					
	22	73.58	62.26		10.29		11.28	

AQUIFER TEST DATA
(Cont.)

WELL OBSERVED GS-09 GS-11
(Data Reported on This Form)

WELL TESTED GS-08

Project SBC-CERCLA Personnel TRedlitz, PDunlavy TEST DATE 1-15-86

Date & hour 1-15-86	Time min	GS-08 (ft) Q 12 gpm		GS-09 (ft)		GS-11 (ft)	Bar
0954	24	74.59	63.27				
	25			10.39		11.28	
	26	74.59	Fluctuating 63.27	Q			
	28	74.59	63.27				
1000	30	73.71	63.27				
	31			10.41		11.28	
	32	74.61	63.27 Stable Q				
	33.0					11.27	
1004	34	74.94	63.62	10.40			
	36	75.15	63.83				
	37			10.41			
	38	75.32	64.00			11.27	
1010	40	75.32	64.00				
	41					11.27	29.61
1015	45	75.55	64.23				
	46			10.42		11.28	29.62
1020	50	75.66	64.34				
		Stop Test & increased to 13 gpm					
1-15-86	(min)	GS-08	Q 13 gpm	GS-09		GS-11	Bar
1200	0	11.68		10.40		11.29	29.64
	.5	29.37	17.69				
	1	36.59	24.91				
	2	550	43.32 Manometer	14.25 / 14.50			
	3	62.13	50.45				
	4	67.45	55.77				
	5	70.78	59.10				
	6	73.48	61.80				
	7	75.89	64.21				
	8	77.70	66.02	10.35			
	9	79.51	67.83			11.24	
1210	10	80.45	68.77				
	11	81.38	69.70	10.35			
	12	82.00	70.32			11.24	
	14	83.21	71.53				
	16	83.90	72.22				
1218	18	85.40	73.72	10.37		11.26	
	20	86.26	74.58				

AQUIFER TEST DATA

WELL OBSERVED (Data Reported on This Form) GS-09, GS 11

WELL TESTED GS-08

Project SBC CERCLA Personnel T. Redisto P. Donlay TEST DATE 1-15-86

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 7W Sec. 19 Tract CRAD

Borehole Diam.(in) 6" Well Diam.(in) 4 Well Depth(ft) 145.5 Perforated Zone(s)(ft) 125.5 - 145.5

Desc. of MP Top of 6" steel casing Stick-up(ft) 1.5 SWL below MP(ft) 11.30 SWL below GS(ft) 9.8

Aquifer Name SBC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand & Gravel

TEST DESCRIPTION

Test Type: (Circle One) (1.) Pumping Well Drawdown; 3. Pumping Well Recovery; 5. Bailer Recovery; 7. Hvorslev Test; 2. Observation Well Drawdown; 4. Observation Well Recovery; 6. Slug Injection or Removal; 8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) GS-11 - 8.7' GS-09 - 9.2' Pump hp. & type GE Pump Depth(ft) 123 - from mp

Water Quality Sample Taken? yes no Specific Conductance (µmhos/cm @ 25°C) Temp(°C) Time

Avg. Discharge(gpm) 11.6 Test Duration(min) 360 Max WL Change(ft) 83.31 Transmissivity (gpd/ft)

Storativity Hydraulic Conductivity(gpd/ft²) Specific Capacity(gpm/ft of drawdown)

REMARKS

Date & hour	Time min	GS-08 (ft)	DRAWDOWNS	GS-09 (ft)		GS-11 (ft)		Bar.
1-15-86 1222	22	86.68	75.00					
	24	86.98	75.30	10.38		11.28		
	26	87.46	75.78					
	28	87.77	76.09					
1230	30	87.93	76.25					
	32			10.38		11.27		
	34	88.17	76.49					
	38	88.70	77.02					
	39			10.38		11.27		
1242	42	89.01	77.33					29.66
	46	89.25	77.57					
	47			10.38		11.28		
1250	50	90.16	78.48					
	54	92.23	80.55					
	55			10.42		11.28		
	58	90.09	78.41					29.63+
1302	62	91.27	79.59	10.42		11.28		2963-
	66	91.38	79.70 SC = 1310					
	70	91.42	79.74	10.42		11.28		
1318	78	91.44	79.76					29.62
1321	81			10.38				
	84	92.37	80.69					
	88	91.36	79.68					
	92	92.27	80.59	10.38		11.28		

AQUIFER TEST DATA
(Cont.)

WELL OBSERVED GS-09, GS 11
(Data Reported on this Form)

WELL TESTED GS-08

Project SBC CERCLA Personnel TRedinha, P Dunlap TEST DATE 1-15-86

Date & hour 1-15-86	Time min	GS-08 ft			GS-09		GS 11	BAR
1335	95	91.55	79.87					
1340	100	92.32	80.64		10.36		11.28	29.63 -
1350	110	93.63	81.95					29.62
1408	128	93.03	81.35		10.36		11.28	
1414	134	93.03	81.35					
1420	140	93.50	81.82					29.62
	143				10.38		11.25	
	145	93.82	82.14					
1430	150	94.01	82.33					
	158				10.35		11.25	29.62
1440	160	94.27	82.59					
1510	190	93.12	81.44	Vertical Bar shut off / Adjusted Flow				
	192				10.36		11.27	29.62
1520	200	93.38	81.70					
1530	210	93.50	81.82	2" 1.240				
1545	225	93.60	81.92		10.38			
1555	235	94.04	82.36					
1600	240	94.23	82.55		10.42		11.26	29.62
1610	250	94.28	82.60					
1630	270	94.57	82.89	2" 1.270	10.42		11.28	
1645	285	95.16	83.48		10.42		11.28	
1700	300	95.18	83.50					29.65
1720	320	95.72	84.04					
1740	340	95.46	83.78		10.46		11.28	
Pump off. 1759	354	94.99	83.31	1755	10.48		11.28	
				1759	10.44			
1800	360	94.79	83.31	Pump off			11.28	
		RECOVERY		S	t/t'			
1801	361	1	60.08	48.4	361			
	362	2	52.70	41.02	181			
	363	3	43.27	31.59	121			
	364	4	36.95	25.27	91			
	365	5	31.30	19.42	73			
	366	6	27.53	15.85	61			
	367	7	24.48	12.8	52.4			
	368	8	21.81	10.13	46			
	369	9	20.00	8.32	41			
1810	370	10	18.50	[illegible]	37			
	371	11	17.37		33.7			

AQUIFER TEST DATA

WELL OBSERVED (Data Reported on This Form) GS-08, GS-11

WELL TESTED GS-09

Project SBC-CERCLA Personnel TR Ulishi, P Dunlay TEST DATE 1-17-86

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 7W Sec. 19 Tract CBHD

Borehole Diam.(in) 6 Well Diam.(in) 4 Well Depth(ft) 75.5 Perforated Zone(s)(ft) 60.5 - 75.5

Desc. of MP Top of steel Casing Stick-up(ft) +1.2 SWL below MP(ft) 10.5 SWL below GS(ft) 9.3

Aquifer Name SBC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand & Gravel

TEST DESCRIPTION

Test Type: (Circle One)
(1) Pumping Well Drawdown
2. Observation Well Drawdown
3. Pumping Well Recovery
4. Observation Well Recovery
5. Bailer Recovery
6. Slug Injection or Removal
7. Hvorslev Test
8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) _____ Pump hp. & type 5HP, GF Pump Depth(ft) 72 from TOP

Water Quality Sample Taken? yes (no) Specific Conductance (μmhos/cm @ 25°C) _____ Temp(°C) _____ Time _____

Avg. Discharge(gpm) 10.0 Test Duration(min) 240 Max WL Change(ft) 58.20 Transmissivity (gpd/ft) _____

Storativity _____ Hydraulic Conductivity(gpd/ft²) _____ Specific Capacity(gpm/ft of drawdown) _____

REMARKS _____

DEPTH TO H2O

Date & hour 1-17-86	Time min		GS 09	S	GS-08		GS 11	
1200	0		10.65		11.30		11.31	
	1		26.40	15.75				
	2		35.77	25.12				
	3		42.60	31.95				
	4		47.08	36.43				
	5		50.37	39.72				
	6		52.53	41.88				
	7		54.44	43.79				
	8		55.65	45.00				
	9		57.08	46.43				
1210	10		58.10	47.45				
	11		58.88	48.23				
	12		59.52	48.87				
	13		60.02	49.37				
	14		60.40	49.75				
1215	15		60.52	49.87				
	16		60.92	50.27				
	17		61.22	50.57				
	18		61.50	50.85				
	19		61.73	51.08				
1220	20		61.95	51.30				
	21		62.041	51.39				
	22		62.10	51.45				
	23		62.20	51.55				

AQUIFER TEST DATA
(Cont.)

WELL OBSERVED GS-08 - GS11
(Data Reported on This Form)

WELL TESTED GS-09

Project SBC CERC/A Personnel JR, PD

DEPTH TO H_2O

TEST DATE 1-17-86

Date & hour	Time min		GS-09	SBC-	GS-08		GS-11	BAR
1224	24		62.38	51.73				
	25		62.55	51.90				
	26		62.50	51.85	Well Development (Small)			
	27		62.48	51.83				
	28		62.65	52.0				
	29		62.71	52.06				
1230	30		62.89	52.24	11.27		11.31	29.81
	32		62.41	51.76				
	34		63.24	52.64				
	36		63.45	52.80				
	38		63.41	52.76				
1240	40		63.52	52.87				
	42		63.68	1850 52.03	Small Fine grain			
	44		63.35	52.70	11.30		11.31	
	46							
	48		64.36	53.71				
1250	50		64.32	53.67				29.85
	54		63.67	53.02				
	56		64.37	53.72	11.26		11.31	
1300	60		63.70	53.05				29.86
	64		62.67	52.02	Probe in perfs			29.87
	68		62.92	52.27				
	73		65.42	54.77				
	76		65.40	2360 54.75				
1320	80		65.80	55.15				
	99		66.80	56.15				
	105		66.70	56.05				
	110		67.37	56.72				
	125		67.24	56.59				29.88
	135		66.93	56.28				
1420	140		67.75	57.10				29.86
	157		67.35	56.70	11.30			
	160		68.01	57.36				
	170		67.70	57.05				
	175		67.45	56.80	11.32		11.28	
	179		67.38	56.73				
1304	184		67.55	56.90				

AQUIFER TEST DATA

WELL OBSERVED (Data Reported on This Form) GS-08 GS-11

WELL TESTED GS-09

Project SBC-CERCLA Personnel T. Bilotta P. Dunlap TEST DATE 1-17-86

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 7E Sec. 19 Tract CRND

Borehole Diam.(in) 6 Well Diam.(in) 4 Well Depth(ft) 755 Perforated Zone(s)(ft) 605-755

Desc. of MP Top of Steel Casing Stick-up(ft) +1.2 SWL below MP(ft) 10.5 SWL below GS(ft) 9.3

Aquifer Name SBC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand & Gravel

TEST DESCRIPTION

Test Type: (Circle One) (1.) Pumping Well Drawdown (3.) Pumping Well Recovery 5. Bailer Recovery 7. Hvorslev Test

2. Observation Well Drawdown 4. Observation Well Recovery 6. Slug Injection or Removal 8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) Pump hp. & type GE Pump Depth(ft) 720 from TOC

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C) Temp(°C) Time

Avg. Discharge(gpm) 10 Test Duration(min) Max WL Change(ft) Transmissivity (gpd/ft)

Storativity Hydraulic Conductivity(gpd/ft²) Specific Capacity(gpm/ft of drawdown)

REMARKS DEPTH TO H2O

Date & hour	Time min		GS-09	S	GS-08		GS-11	
1-17-86 1510	190		67.25	56.6				
1525	200		67.58	56.93				
	205		67.75	57.10				GS-14
	210		67.93	57.28	11.32		11.30	937
	219		68.86	58.21				
	227		68.71	58.06				
	231		68.72	58.07				
1556	236		68.85	58.20				
		RECOVERY						
1600	Pump off			S'	t/t'			
1601	241	1	55.35	44.70	241			
	242	2	42.55	31.90	121			
	243	3	33.01	22.36	81			
	244.5	4.5	23.90	13.25	54.5			
	245.5	5.5	20.10	9.45	44.0			
	247	7.0	16.37	5.72	35.3			
	248	8.0	14.79	4.14	31.0			
	249	9.0	13.66	3.01	27.7			
1610	250	10.0	12.85	2.20	25			
	251	11	12.29	1.64	22.8			
	252	12	11.90	1.25	21			
	253	13	11.65	1.00	19.5			
	255	15	11.30	.65	17			
1617	257	17	11.17	.52	15.1			

AQUIFER TEST DATA
(Cont.)

WELL OBSERVED GS-08, GS11
(Data Reported on this form)

WELL TESTED GS-07

Project SBC CERCLA Personnel TR, PD. TEST DATE 1-17-86

Date & hour 1-17-86	Time min	min	GS-09 s	s'	GS-08	t/t'	GS-11	
1619	259	19	11.05	.40		13.6		
1621	261	21	11.01	.36		12.4		
	263	23	10.94	.29		11.4		
	265	25	10.91	.26		10.6		
	272	32	10.87	.22		8.5		
1710	310	70	10.78	.13		4.4		

AQUIFER TEST DATA

WELL OBSERVED (Data reported on this form) GS-08, GS-11

WELL TESTED GS-09

Project SBC-CERC/12 Personnel TRdisha, PDunlop TEST DATE 1-17-86

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 7W Sec. 19 Tract CBHD

Borehole Diam.(in) 6 Well Diam.(in) 4 Well Depth(ft) 75.5 Perforated Zone(s)(ft) 60.5 - 75.5

Desc. of MP Top of steel Casing Stick-up(ft) +1.2 SWL below MP(ft) 10.5 SWL below GS(ft) 9.3

Aquifer Name SBC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand & Gravel

TEST DESCRIPTION

Test Type: (Circle One) (1) Pumping Well Drawdown; 2. Observation Well Drawdown; 3. Pumping Well Recovery; 4. Observation Well Recovery; 5. Bailer Recovery; 6. Slug Injection or Removal; 7. Hvorslev Test; 8. Other (Specify)_____

Distance of Observation Well from Pumping Well(ft)_____ Pump hp. & type 5HP, GF Pump Depth(ft) 72 from TOP

Water Quality Sample Taken? yes (no) Specific Conductance (μmhos/cm @ 25°C)_____ Temp(°C)_____ Time_____

Avg. Discharge(gpm) 10.0 Test Duration(min) 240 Max WL Change(ft) 58.20 Transmissivity (gpd/ft)_____

Storativity_____ Hydraulic Conductivity(gpd/ft²)_____ Specific Capacity(gpm/ft of drawdown)_____

REMARKS_____

DEPTH TO H_2O

Date & hour 1-17-86	Time min		GS 09	S	GS-08		GS 11	
1200	0		10.65		11.30		11.31	
	1		26.40	15.75				
	2		35.77	25.12				
	3		42.60	31.95				
	4		47.08	36.43				
	5		50.37	39.72				
	6		52.53	41.88				
	7		54.44	43.79				
	8		55.65	45.00				
	9		57.08	46.43				
1210	10		58.10	47.45				
	11		58.88	48.23				
	12		59.52	48.87				
	13		60.02	49.37				
	14		60.40	49.75				
1215	15		60.52	49.87				
	16		60.72	50.27				
	17		61.22	50.57				
	18		61.50	50.85				
	19		61.73	51.08				
1220	20		61.95	51.30				
	21		62.041	51.39				
	22		62.10	51.45				
	23		62.20	51.55				

AQUIFER TEST DATA
(Cont.)

WELL OBSERVED GS-08 - GS11
(Data Reported in this Form)

WELL TESTED GS-09

Project SBC CERCLA Personnel JR, PD

TEST DATE 1-17-86

DEPTH TO H_2O

Date & hour	Time min		GS-09	SBC-	GS-08		GS-11	BP/
1224	24		62.38	51.73				
	25		62.55	51.90				
	26		62.50	51.85	Well Development (Small)			
	27		62.48	51.83				
	28		62.65	52.0				
	29		62.71	52.06				
1230	30		62.89	52.24	11.27		11.31	2981
	32		62.41	51.76				
	34		63.24	52.64				
	36		63.45	52.80				
	38		63.41	52.76				
1240	40		63.52	52.87				
	42		63.68	1850 52.03	Sand Fine grain			
	44		63.35	52.70	11.30		11.31	
	46							
	48		64.36	53.71				
1250	50		64.32	53.67				2985
	54		63.67	53.02				
	56		64.37	53.72	11.26		11.31	
1300	60		63.70	53.05				
	64		62.67	52.02	packer in perfs			2986
	68		62.92	52.27				2982
	73		65.42	54.77				
	76		65.40	2360 54.75				
1320	80		65.80	55.15				
	99		66.80	56.15				
	105		66.70	56.05				
	110		67.37	56.72				
	125		67.24	56.59				2988
	135		66.93	56.28				
1420	140		67.75	57.10				
	157		67.35	56.70	11.30			2986
	160		68.01	57.36				
	170		67.70	57.05				
	175		67.45	56.80	11.32		11.28	
	179		67.38	56.73				
1304	184		67.55	56.90				

AQUIFER TEST DATA

WELL OBSERVED (Data Reported on This Form) GS-08 GS-11

WELL TESTED GS-09

Project SBC-CERC/A Personnel T Rubeck P Dunlay TEST DATE 1-17-86

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 7E Sec. 19 Tract CRDP

Borehole Diam.(in) 6 Well Diam.(in) 4 Well Depth(ft) 755 Perforated Zone(s)(ft) 605 – 755

Desc. of MP Top of Steel Casing Stick-up(ft) 1.2 SWL below MP(ft) 10.5 SWL below GS(ft) 9.3

Aquifer Name SBC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand & Gravel

TEST DESCRIPTION

Test Type: (Circle One) (1) Pumping Well Drawdown (2) Pumping Well Recovery 5. Bailer Recovery 7. Hvorslev Test
2. Observation Well Drawdown 4. Observation Well Recovery 6. Slug Injection or Removal 8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) _____ Pump hp. & type GE Pump Depth(ft) 72 from TOC

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C) _____ Temp(°C) _____ Time _____

Avg. Discharge(gpm) 10 Test Duration(min) _____ Max WL Change(ft) _____ Transmissivity (gpd/ft) _____

Storativity _____ Hydraulic Conductivity(gpd/ft²) _____ Specific Capacity(gpm/ft of drawdown) _____

REMARKS _____

DEPTH TO H2O

Date & hour	Time min		GS-09	s	GS-08		GS-11	
1-17-86 1510	190		67.25	56.6				
1525	200		67.58	56.93				
	205		67.75	57.10				GS-14
	210		67.93	57.28	11.32		11.30	937
	219		68.86	58.21				
	227		68.71	58.06				
	231		68.72	58.07				
1556	236		68.85	58.20				
		RECOVERY						
1600	Pump off			s'	t/t'			
1601	241	1	55.35	44.70	241			
	242	2	42.55	31.90	121			
	243	3	33.01	22.36	81			
	244.5	4.5	23.90	13.25	54.5			
	245.5	5.5	20.10	9.45	44.0			
	247	7.0	16.37	5.72	35.3			
	248	8.0	14.79	4.14	31.0			
	249	9.0	13.66	3.01	27.7			
1610	250	10.0	12.85	2.20	25			
	251	11	12.29	1.64	22.8			
	252	12	11.90	1.25	21			
	253	13	11.65	1.00	19.5			
	255	15	11.30	.65	17			
1617	257	17	11.17	.52	15.1			

AQUIFER TEST DATA
(Cont.)

WELL OBSERVED GS-08, GS11
(Data Reported on this form)

WELL TESTED GS-09

Project SBC CERCLA Personnel JR, PD.

TEST DATE 1-17-86

Date & hour 1-17-86	Time min	min	GS-09 ft	s'	GS-08	t/t'	GS-11	
1619	259	19	11.05	.40		13.6		
1621	261	21	11.01	.36		12.4		
	263	23	10.94	.29		11.4		
	265	25	10.91	.26		10.6		
	272	32	10.87	.22		8.5		
1710	310	70	10.78	.13		4.4		

Sheet 1 of 2 page

AQUIFER TEST DATA

WELL OBSERVED GS-13A
(Date Reported on State Form)
WELL TESTED GS-13B
TEST DATE 1-16-86

Project SBC-CERCLA Personnel T. Redisky, P. Dunlap

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 8W Sec. 24 Tract CBA

Borehole Diam.(in) 6" Well Diam.(in) 6" Well Depth(ft) 33 Perforated Zone(s)(ft) 24-33

Desc. of MP Top steel casing Stick-up(ft) 0.5 SWL below MP(ft) 6.11 SWL below GS(ft) _____

Aquifer Name SBC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand & Gravel

TEST DESCRIPTION

Test Type: (Mandatory) (1.) Pumping Well Drawdown (3.) Pumping Well Recovery 5. Bailer Recovery 7. Hvorslev Test
2. Observation Well Drawdown 4. Observation Well Recovery 6. Slug Injection or Removal 8. Other (Specify) _____

Distance of Observation Well from Pumping Well(ft) 19.5 Pump hp. & type GE Pump Depth(ft) 298

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C) _____ Temp(°C) _____ Time _____

Avg. Discharge(gpm) 30 Test Duration(min) 240 Max WL Change(ft) 22.65 Transmissivity (gpd/ft) _____

Storativity _____ Hydraulic Conductivity(gpd/ft²) _____ Specific Capacity(gpm/ft of drawdown) _____

REMARKS _____

DEPTH TO H₂O 1 GAL. VOL.

Date & hour	Time min		GS-13B	S.	GS-13A	Dec.	BAR	
1-16-86 1315	0		6.11		6.42		29.70	
1316	1		14.70	8.59				
	2		15.34	9.23			29.70+	
	3		16.09	9.98				
	4		16.84	10.78				
1320	5		17.60	11.49	6.47		29.71	
	6		17.81	11.70		Zone		
	7		17.57	11.46				
	8		17.64	11.58				
	9		18.29	12.18				
1325	10		18.87	12.78	6.48			
	11				6.49			
	12		19.98	13.87				
	14		20.22	14.11	6.50		29.72	
1330	15		21.26	15.15	6.50	Zone		
	17		21.73	15.62	6.52			
1335	20		22.53	16.42	6.53		29.73	
1337	22		23.00	16.89	6.53			
	24		23.30	17.19	6.53		29.74+	
	26		23.50	17.39				
	28		23.65	17.54	6.53			
1345	30		23.83	17.72	6.53	Zone	29.75	
	34		24.63	18.52				
1353	38		25.22	19.11			29.76-	
	40		25.45	19.34	V-174			

AQUIFER TEST DATA
(Cont.)

WELL OBSERVED GS-13A
(Data reported on this form)

WELL TESTED GS-13B

Project SBC - CERCLA Personnel TR. PD

TEST DATE 1-16-86

Date & hour	Time min		GS-13B	S	GS13A	Dec	Bar	
1359	44		25.45	19.34	6.55	20	29.75	
	48		25.35	19.24		22 m	adjusted to 20	
	52		25.21	19.10	6.55			
1415	58 60		25.56 (23 42)	19.45 (19.31)		20	29.73	S.C. 730
	65		25.81	19.70	6.56			
	70		26.08	19.97				
1430	75		26.17	20.06				
	80		26.25	20.14				
	85		26.34	20.23	6.57			
	95		26.52	20.41			29.76	
	100		26.74	20.63		20		
1500	105		26.94	20.83	6.56			
	110		26.99	20.88				
	115		26.99	20.88				
	125		27.02	20.91	6.55		29.76	
1530	135		26.82	20.71				
1535	140		26.93	20.82	6.55	21.78 m		
	145		27.00	20.89			29.76	
1600	165		26.80	20.69				
	175		26.79	20.68	6.57			
1620	185		26.84	20.73				
	195		26.56	20.45	6.57			
	205		28.30	22.19				
	215		28.75	22.64	6.55		29.77	
1655	220		28.76	22.65	6.57			
1705	230		28.65	22.54				
1715	240		28.55	22.44	Pump	off	—	
		Recovery		s'	T/t'			
1715	240	0	28.55	22.44				
	241	1	26.38	20.27	241			
	242	2	24.40	18.29	121			
	243	3	22.72	16.61	81			
	244	4	21.17	15.06	61			
	245	5	19.72	13.09	49			
	246	6	18.35	12.25	41			
	247.5	7.5	17.06	10.95	33			
	248	8	16.08	9.97	31			

Sheet 2 of 2 pages

AQUIFER TEST DATA

WELL OBSERVED (Data Reported on this Form) GS-13A

WELL TESTED GS-13B

Project SBC-CERCLA Personnel T Rudisha, P Dunlap TEST DATE 1-16-86

WELL DESCRIPTION

State MT County S. Silver Bow Location: T 3N R 8W Sec. 24 Tract CBA

Borehole Diam.(in) 6 Well Diam.(in) 6 Well Depth(ft) 33 Perforated Zone(s)(ft) 24-33

Desc. of MP Top steel casing Stick-up(ft) 0.5 SWL below MP(ft) _____ SWL below GS(ft) _____

Aquifer Name SBC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand & Gravel

TEST DESCRIPTION

Test Type: (Circle One)
1. Pumping Well Drawdown
(3.) Pumping Well Recovery
5. Bailer Recovery
7. Hvorslev Test
2. Observation Well Drawdown
4. Observation Well Recovery
6. Slug Injection or Removal
8. Other (Specify) _____

Distance of Observation Well from Pumping Well(ft) 19.5 Pump hp. & type GE Pump Depth(ft) 29.8

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C) _____ Temp(°C) _____ Time _____

Avg. Discharge(gpm) 3 Test Duration(min) 43 Max WL Change(ft) 22.65 Transmissivity (gpd/ft) _____

Storativity _____ Hydraulic Conductivity(gpd/ft²) _____ Specific Capacity(gpm/ft of drawdown) _____

REMARKS _____

Date & hour 1-16-86	Time Mtn	min	GS13B	S'	GS-13A	t/t'		
1724	249	9	15.13	9.02		27.7		
1725	250	10	14.00	7.89		25		
	251	11	13.20	7.09		22.8		
	252	12	12.35	6.24		21		
	253	13	11.93	5.82		19.5		
	254	14	11.28	5.17		18.1		
1730	255	15	10.71	4.60				
	256	16	10.20	4.09	6.48	16		
	258	18	9.33	3.22	6.47	14.3		
1735	260	20	8.64	1.93	6.46	13		
	262	22	8.03	1.92		11.9		
	264	24	7.60	1.49	6.48	11.0		
	266	26	7.24	1.13		10.2		
	268	28	6.96	0.85		9.6		
1745	270	30	6.74	0.63		9.0		
	272	32	6.53	0.42		8.5		
1750	275	35	6.33	0.22		7.9		
	279	39	6.17	0.06		7.2		
1758	283	43	6.10	-.01		6.6		

Sheet 1 of 2 Page

AQUIFER TEST DATA

WELL OBSERVED GS-13A (Data Reported on This Form)
WELL TESTED GS-13B
TEST DATE 1-16-86

Project SBC-CERCLA Personnel T. Ridolfi, P. Dunlop

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 8W Sec. 24 Tract CBN

Borehole Diam.(in) 6" Well Diam.(in) 6" Well Depth(ft) 33 Perforated Zone(s)(ft) 24-33

Desc. of MP Top steel casing Stick-up(ft) 0.5 SWL below MP(ft) 6.11 SWL below GS(ft) _____

Aquifer Name SBC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand & Gravel

TEST DESCRIPTION

Test Type: (Circle One)
(1.) Pumping Well Drawdown
(3.) Pumping Well Recovery
2. Observation Well Drawdown
4. Observation Well Recovery
5. Bailer Recovery
6. Slug Injection or Removal
7. Hvorslev Test
8. Other (Specify) _____

Distance of Observation Well from Pumping Well(ft) 19.5 Pump hp. & type GF Pump Depth(ft) 298

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C) _____ Temp(°C) _____ Time _____

Avg. Discharge(gpm) 30 Test Duration(min) 240 Max WL Change(ft) 22.65 Transmissivity (gpd/ft) _____

Storativity _____ Hydraulic Conductivity(gpd/ft²) _____ Specific Capacity(gpm/ft of drawdown) _____

REMARKS _____

DEPTH TO H₂O 1 GAL. VOL.

Date & hour	Time m.n		GS-13B	S.	GS-13A	Dec.	BAT	
1-16-86 1315	0		6.11		6.42		2970	
1316	1		14.70	8.59				
	2		15.34	9.23			2970+	
	3		16.09	9.98				
	4		16.84	10.78				
1320	5		17.60	11.49	6.47		2971	
	6		17.81	11.70		20sec		
	7		17.57	11.46				
	8		17.69	11.58				
	9		18.29	12.18				
1325	10		18.87	12.78	6.48			
	11				6.49			
	12		19.98	13.87				
	14		20.22	14.11	6.50		2972	
1330	15		21.26	15.15	6.50	20sec		
	17		21.73	15.62	6.52			
1335	20		22.53	16.42	6.53		2973	
1337	22		23.00	16.89	6.53			
	24		23.30	17.19	6.53		2974+	
	26		23.50	17.39				
	28		23.65	17.54	6.53			
1345	30		23.83	17.72	6.53	20sec	2975	
	34		24.63	18.52				
1353	38		25.22	19.11			2976-	
	40		25.45	19.34				

Sheet 1 of 2 page

AQUIFER TEST DATA

WELL OBSERVED (Data Reported on This Form) GS-13A

WELL TESTED GS-13B

Project SBC-CEXC/A Personnel TRobisky, P Dunlavy TEST DATE 1-16-86

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 8W Sec. 24 Tract CBA

Borehole Diam.(in) 6" Well Diam.(in) 6" Well Depth(ft) 33 Perforated Zone(s)(ft) 24-33

Desc. of MP Top steel casing Stick-up(ft) 0.5 SWL below MP(ft) 6.11 SWL below GS(ft) _____

Aquifer Name SBC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand & Gravel

TEST DESCRIPTION

Test Type: (Circle One) (1.) Pumping Well Drawdown (3.) Pumping Well Recovery 5. Bailer Recovery 7. Hvorslev Test

2. Observation Well Drawdown 4. Observation Well Recovery 6. Slug Injection or Removal 8. Other (Specify) _____

Distance of Observation Well from Pumping Well(ft) 19.5 Pump hp. & type GE Pump Depth(ft) 298

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C) _____ Temp(°C) _____ Time _____

Avg. Discharge(gpm) 30 Test Duration(min) 240 Max WL Change(ft) 22.65 Transmissivity (gpd/ft) _____

Storativity _____ Hydraulic Conductivity(gpd/ft²) _____ Specific Capacity(gpm/ft of drawdown) _____

REMARKS _____

DEPTH TO H₂O 1 GAL. VOL.

Date & hour	Time Min		GS-13B	S.	GS-13A	Sec.	BAT	
1-16-86 1315	0		6:11		6.42		29 70	
1316	1		14.70	8.59				
	2		15.34	9.23			29.70+	
	3		16.09	9.98				
	4		16.84	10.78				
1320	5		17.60	11.49	6.47		29.71	
	6		17.81	11.70		20 sec		
	7		17.57	11.46				
	8		17.69	11.58				
	9		18.29	12.18				
1325	10		18.87	12.78	6.48			
	11				6.49			
	12		19.98	13.87				
	14		20.22	14.11	6.50		29.72	
1330	15		21.26	15.15	6.50	20 sec		
	17		21.73	15.62	6.52			
1335	20		22.53	16.42	6.53		29.73	
1337	22		23.00	16.89	6.53			
	24		23.30	17.19	6.53		29.74+	
	26		23.50	17.39				
	28		23.65	17.54	6.53			
1345	30		23.83	17.72	6.53	20 sec	29.75	
	34		24.63	18.52				
1353	38		25.22	19.11			29.76-	
	40		25.4	V-178				

AQUIFER TEST DATA

WELL OBSERVED (Data Reported on This Form) GS-13A
WELL TESTED GS-13B

Project SBC-CERCLA Personnel T Rudisill, P Dunlap TEST DATE 1-16-86

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 8W Sec. 24 Tract CBA

Borehole Diam.(in) 6 Well Diam.(in) 6 Well Depth(ft) 33 Perforated Zone(s)(ft) 24-33

Desc. of MP Top steel casing Stick-up(ft) 0.5 SWL below MP(ft) _____ SWL below GS(ft) _____

Aquifer Name SBC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) Sand & Gravel

TEST DESCRIPTION

Test Type: (Circle One)
1. Pumping Well Drawdown
(3.) Pumping Well Recovery
5. Bailer Recovery
7. Hvorslev Test
2. Observation Well Drawdown
4. Observation Well Recovery
6. Slug Injection or Removal
8. Other (Specify) _____

Distance of Observation Well from Pumping Well(ft) 19.5 Pump hp. & type GE Pump Depth(ft) 29.8

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C) _____ Temp(°C) _____ Time _____

Avg. Discharge(gpm) 3 Test Duration(min) 43 Max WL Change(ft) 22.65 Transmissivity (gpd/ft) _____

Storativity _____ Hydraulic Conductivity(gpd/ft²) _____ Specific Capacity(gpm/ft of drawdown) _____

REMARKS _____

Date & hour 1-16-86	Time min	t-t'	GS13B	s'	GS-13A	t/t'		
1724	249	9	15.13	9.02		27.7		
1725	250	10	14.00	7.89		25		
	251	11	13.20	7.09		22.8		
	252	12	12.35	6.24		21		
	253	13	11.93	5.82		19.5		
	254	14	11.28	5.17		18.1		
1730	255	15	10.71	4.60				
	256	16	10.20	4.09	6.48	16		
	258	18	9.33	3.22	6.47	14.3		
1735	260	20	8.64	1.93	6.46	13		
	262	22	8.03	1.92		11.9		
	264	24	7.60	1.49	6.48	11.0		
	266	26	7.24	1.13		10.2		
	268	28	6.96	0.85		9.6		
1745	270	30	6.74	0.63		9.0		
	272	32	6.53	0.42		8.5		
1750	275	35	6.33	0.22		7.9		
	279	39	6.17	0.06		7.2		
1758	283	43	6.10	-.01		6.6		

AQUIFER TEST DATA

THOMAS REDISKE AND ASSOC.

WELL OBSERVED (Data Reported on This Form) GS-13A

WELL TESTED GS-13B

Project SBC-CERCLA Personnel T Rediske, P Dawley TEST DATE 1-16-86

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 8W Sec. 24 Tract CBA

Borehole Diam.(in) 6 Well Diam.(in) 6 Well Depth(ft) ±0.5 Perforated Zone(s)(ft) 24-34 mills knife

Desc. of MP Typical Casing Stick-up(ft) _____ SWL below MP(ft) 5.96 SWL below GS(ft) 5.46

Aquifer Name SBC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) _____

TEST DESCRIPTION

Test Type: (Circle One)
1. Pumping Well Drawdown
2. Observation Well Drawdown
3. Pumping Well Recovery
4. Observation Well Recovery
5. Bailer Recovery
6. Slug Injection or Removal
7. Hvorslev Test
8. Other (Specify) _____

Distance of Observation Well from Pumping Well(ft) _____ Pump hp. & type _____ Pump Depth(ft) 25 from MP

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C) _____ Temp(°C) _____ Time _____

Avg. Discharge(gpm) 2.0 Test Duration(min) _____ Max WL Change(ft) _____ Transmissivity (gpd/ft) _____

Storativity _____ Hydraulic Conductivity(gpd/ft²) _____ Specific Capacity(gpm/ft of drawdown) _____

REMARKS measure gpm by gallon jug.

Date & hour	Time	GS 13B	S	GS-13A		Dec	Barometer	
1-16 86	0945	5.96	.	6.45				
1200	0	5.96		6.44				
	.5	13.16						
	1	13.90						
	2	15.31						
	3	16.0						
	4	16.01						
	5	16.05						
	6			6.48				
	7	16.12						
	8	16.25						
	9	16.40				30 sec		
	10	16.62						
	11			6.50				
	12	16.92						
	13	17.08		6.50				
	14	17.29		6.51		30 sec	29.75+	
	16	17.40						
	18	17.56		6.51				
	20	17.69						
	22	17.80					29.75+	
	24	17.90						
	26	17.3	760	6.5				
	28							

AQUIFER TEST DATA

THOMAS REDISKE AND ASSOC.

WELL OBSERVED (Data Reported on This Form) GS-13 A

WELL TESTED GS-13 B

Project SBC - CERC/A Personnel T Rediske, P Dunlavy TEST DATE 1-16-86

WELL DESCRIPTION

State MT County Silver Bow Location: T 3N R 8W Sec. 24 Tract CBA

Borehole Diam.(in) 6 Well Diam.(in) 6 Well Depth(ft) ±0.5 Perforated Zone(s)(ft) 24-34 mills slotted

Desc. of MP Typical Casing Stick-up(ft) _____ SWL below MP(ft) 5.96 SWL below GS(ft) 5.46

Aquifer Name SBC Alluvium Aquifer Description (Lithology, Thickness, Depth to Top) _____

TEST DESCRIPTION

Test Type: (Circle One)
1. Pumping Well Drawdown
2. Observation Well Drawdown
3. Pumping Well Recovery
4. Observation Well Recovery
5. Bailer Recovery
6. Slug Injection or Removal
7. Hvorslev Test
8. Other (Specify) _____

Distance of Observation Well from Pumping Well(ft) _____ Pump hp. & type _____ Pump Depth(ft) 25 from MP

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C) _____ Temp(°C) _____ Time _____

Avg. Discharge(gpm) 2.0 Test Duration(min) _____ Max WL Change(ft) _____ Transmissivity (gpd/ft) _____

Storativity _____ Hydraulic Conductivity(gpd/ft²) _____ Specific Capacity(gpm/ft of drawdown) _____

REMARKS measure gpm by gallon jug

Date & hour	Time	GS 13 B	S	GS-13 A		Acc	Barometer	
1-16-86	0945	5.96		6.45				
1200	0	5.96		6.44				
	i 5	13.16 / 13.50						
	2	15.31						
	3	16.0						
	4	16.01						
	5	16.05						
	6			6.48				
	7	16.12						
	8	16.25						
	9	16.40				30 sec		
	10	16.62						
	11			6.50				
	12	16.92						
	13	17.08		6.50				
	14	17.29		6.51		30 sec	2975+	
	16	17.40						
	18	17.56		6.51				
	20	17.69						
	22	17.80					2975+	
	24	17.90						
	26	17.93	760	6.5				
	28	17.96						

85

AQUIFER TEST DATA

STILLER AND ASSOCIATES
CONSULTING HYDROLOGISTS · GEOLOGISTS · ENGINEERS

WELL OBSERVED (Data Reported on This Form) TS-01
WELL TESTED TS-01
TEST DATE 6/26/85

Project SBC CERCLA Personnel T.A. - P.D.

WELL DESCRIPTION

State MONTANA County SILVER BOW Location: T 3N R 9W Sec. 22 Tract AAD

Borehole Diam.(in) 6 5/8" Well Diam.(in) 4" Well Depth(ft) 26.5' Perforated Zone(s)(ft) 16'-26'

Desc. of MP RECORDER HOUSING BASE Stick-up(ft) +1.5' SWL below MP(ft) 9.84' SWL below GS(ft) 8.44'

Aquifer Name SBC ALLUVIUM Aquifer Description (Lithology, Thickness, Depth to Top) SAND, GRAVEL

TEST DESCRIPTION

Test Type: (Circle One) (1.) Pumping Well Drawdown; 2. Observation Well Drawdown; 3. Pumping Well Recovery; 4. Observation Well Recovery; 5. Bailer Recovery; 6. Slug Injection or Removal; 7. Hvorslev Test; 8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) 0 Pump hp. & type 1HP Pump Depth(ft) 24.0'

Water Quality Sample Taken? yes (no) Specific Conductance (μmhos/cm @ 25°C)____ Temp(°C)____ Time____

Avg. Discharge(gpm) 28 Test Duration(min)____ Max WL Change(ft) 1.87 Transmissivity (gpd/ft)____

Storativity____ Hydraulic Conductivity(gpd/ft²)____ Specific Capacity(gpm/ft of drawdown) 28/9.20 = 3.02

REMARKS 50 PSI TRANSDUCER, ZERO OFFSET = (-1.92); SENSITIVITY = (1.0138); IN AIR, TRANS READING = (-2.39) $Q = 2 \times (3.1259 \cdot \sqrt{h})$ h = MANOMETER

Date & hour	Time	TRANSDUCER READING	BAROMETER (In.)	MANOMETER (In.)	HEAD (ft)	DRAWDOWN (ft)	PH (S.U.)	S.C. (μmhos)	1/T
17.30	00.00	10.33	30.24	15"	19.61	0			
1730.5	.5	4.65	30.23		13.16	6.45			2.86x10
1731	1.0	4.12			12.55	7.06			1.44x10
1732	2.0	3.99			12.41	7.20			7.2x10
1733	3.0	3.98			12.39	7.22			4.8x10²
1734	4.0	3.96			12.37	7.24			3.6x10⁻
1735	5.0	3.95			12.36	7.25			2.88x10
1736	6.0	3.96	30.24		12.36	7.25			2.4x10
1737	7.0	3.96			12.36	7.25			2.06x10
1738	8.0	3.95			12.35	7.26			1.8x10²
1739	9.0	3.94		12.5"	12.34	7.27			1.6x10²
1740	10.0	3.76		15"	12.13	7.48			1.44x10²
1740.5	10.5	3.63		15"	11.98	7.63			1.37x10²
1741.5	11.5	4.76		16"	13.27	6.34			1.25x10
1742	12.0	3.80			12.18	7.43			1.20x10
1743	13.0	3.82			12.20	7.41			1.11x10²
1744	14.0	3.81		16"	12.19	7.42			1.03x10
1745	15.0	3.82	30.24		12.20	7.41			9.6x10
1746	16.0	3.81	30.25	16"	12.18	7.43			9x10
1748	18.0	3.58	30.25	16"	11.92	7.69			8x10
1750	20.0	3.08	30.26		11.33	8.28			7.2x10
1252	22.0	3.20	30.27	17"	11.46	8.15			6.5x10
1754	24.0	3.38			11.66	7.95			6.0x10
1756	26.0	3.90	30.27	17"	12.26	7.35			5.5x10

AQUIFER TEST DATA

STILLER AND ASSOCIATES
CONSULTING HYDROLOGISTS · GEOLOGISTS · ENGINEERS

WELL OBSERVED (Data Reported on This Form) TS-01
WELL TESTED TS-01
TEST DATE 9-26-85, 9-27-85

Project SBC - CERCLA Personnel TR. - P.D.

WELL DESCRIPTION

State MT County SILVER BOW Location: T 3N R 9W Sec. 22 Tract HAD

Borehole Diam.(in) 6 5/8" Well Diam.(in) 4" Well Depth(ft) 26 5' Perforated Zone(s)(ft) 16' - 26'

Desc. of MP RECORDER HOUSING CASE Stick-up(ft) +1.5' SWL below MP(ft) 9.84' SWL below GS(ft) 8.44'

Aquifer Name SBC - ALLUVIUM Aquifer Description (Lithology, Thickness, Depth to Top) SAND, GRAVEL

TEST DESCRIPTION

Test Type: (Circle One) (1) Pumping Well Drawdown; 2. Observation Well Drawdown; 3. Pumping Well Recovery; 4. Observation Well Recovery; 5. Bailer Recovery; 6. Slug Injection or Removal; 7. Hvorslev Test; 8. Other (Specify)

Distance of Observation Well from Pumping Well(ft)_____ Pump hp. & type 1 H.P. Pump Depth(ft) 24.0'

Water Quality Sample Taken? yes (no) Specific Conductance (μmhos/cm @ 25°C)_____ Temp(°C)_____ Time_____

Avg. Discharge(gpm) 28 Test Duration(min) 1440 Max WL Change(ft) 1.87 Transmissivity (gpd/ft)_____

Storativity_____ Hydraulic Conductivity(gpd/ft²)_____ Specific Capacity(gpm/ft of drawdown)_____

REMARKS_____

Date & hour	Time	TRANSDUCER READING	BAROMETER (in)	MANOMETER (in)	HEAD (ft)	DRAWDOWN (ft)	pH	S.C. (μmhos)	
2130	240	2.34	30.32		10.42	9.19			6
2215	285	2.45	30.34		10.53	9.10	6.4	823	7.5
2230	300	2.44	30.36		10.49	9.12			4.8
2240	310	2.45	30.35	20"	10.51	9.10			4.6
2250	320	2.43			10.49	9.12			4.5
2300	330	2.42			10.48	9.13			4.4
2310	340	2.39	30.34		10.46	9.15			4.2
2320	350	2.41			10.48	9.13			4.11
6-27-85 0020	410	2.39			10.46	9.15			3.5
0045	435	2.38	30.35		10.43	9.18			3.3
0100	450	2.39	30.36	20"	10.43	9.18			3.2
0200	510	2.41	30.35	20"	10.47	9.14			2.8
0300	570	2.38	30.34	20"	10.45	9.16			2.5
0400	630	2.39	30.31		10.49	9.12			2.3
0500	690	2.38	30.28		10.51	9.10			2.1
0600	750	2.37			10.50	9.11			1.92
0700	810	2.21	30.24		10.25	9.36			1.8
0800	870	2.17	30.36		10.18	9.43	6.7	753	1.7 10"
0900	930	2.20	30.33		10.25	9.36			1.5
1000	990	2.21	30.31		10.29	9.32	6.7	847	1.6 8.5"
1100	1050	2.20	30.30		10.29	9.32			1.4
1200	1110	2.18	30.30		10.26	9.35	6.8	824	1.3 9.5
1400	1230	2.20	30.25		10.34	9.27	6.9	838	1.2 11"
1540	1330	2.20	30.20		10.40	9.21			1.1

AQUIFER TEST DATA

5 OF 5

16

STILLER AND ASSOCIATES
CONSULTING HYDROLOGISTS · GEOLOGISTS · ENGINEERS

WELL OBSERVED (Data Reported on This Form) TS-01
WELL TESTED TS-01
TEST DATE 6-27-84

Project SBC - CERCLA Personnel T.R. - P.D.

WELL DESCRIPTION

State MONTANA County SILVER BOW Location: T 3N R 9W Sec. 22 Tract AAD

Borehole Diam.(in) 6 5/8" Well Diam.(in) 4" Well Depth(ft) 26.5' Perforated Zone(s)(ft) 16'-26'

Desc. of MP BASE OF AERODEX HOUSING Stick-up(ft) +1.5' SWL below MP(ft) 9.84' SWL below GS(ft) 8.44'

Aquifer Name _____ Aquifer Description (Lithology, Thickness, Depth to Top) _____

TEST DESCRIPTION

Test Type: (Circle One)
1. Pumping Well Drawdown
(3.) Pumping Well Recovery
5. Bailer Recovery
7. Hvorslev Test
2. Observation Well Drawdown
4. Observation Well Recovery
6. Slug Injection or Removal
8. Other (Specify) _____

Distance of Observation Well from Pumping Well(ft) _____ Pump hp. & type 1 HP Pump Depth(ft) _____

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C) _____ Temp(°C) _____ Time _____

Avg. Discharge(gpm) _____ Test Duration(min) 187 Max WL Change(ft) 9.43 Transmissivity (gpd/ft) _____

Storativity _____ Hydraulic Conductivity(gpd/ft²) _____ Specific Capacity(gpm/ft of drawdown) _____

REMARKS TRANSDUCER 50 PSI SENSITIVITY = 1.0138, ZERO OFFSET = (-1.92) AIR INST. READING = (-2.39)

Date & hour 6-27-84	Time t	t'	t/t'	TRANSDUCER READING	BAROMETER READING	HEAD (in)	RESIDUAL DRAWDOWN	
1730	1440	00.0	0.	2.16	30.21	10.34	9.27	
1730.5	1440.5	0.5	2881	9.31		18.49	1.12	
1731	1441	1.0	1441	10.00		19.27	0.34	
1732	1442	2.0	721	10.16		19.46	0.15	
1733	1443	3.0	481	10.20	30.21	19.50	0.11	
1734	1444	4.0	361	10.22	30.23	19.50	0.11	
1736	1446	6.0	241	10.23		19.51	0.10	
1738	1448	8.0	181	10.24		19.53	0.08	
1740	1450	10.0	145	10.24		19.53	0.08	
1746	1456	16.0	91	10.24	30.23	19.53	0.08	
1750	1460	20.0	73	10.24		19.53	0.08	
1755	1465	25.0	58.6	10.24		19.53	0.08	
1800	1470	30.0	49	10.24		19.53	0.08	
1805	1475	35	42	10.25		19.54	0.07	
1810	1480	40	37	10.24		19.53	0.08	
1940	1576	136	12	10.27		19.56	0.05	
2037	1627	187	9	10.28	30.24	19.56	0.05	

AQUIFER TEST DATA

DAVID STILLER AND ASSOCIATES
HYDROLOGISTS · GEOLOGISTS · ENGINEERS

WELL OBSERVED (Data Reported on This Form) GS-15A
WELL TESTED GS-15A
TEST DATE 1-16-86

Project SBC CERCLA Personnel P. DUNLAVY

WELL DESCRIPTION

State MT County SILVER BOW Location: T 3N R 8W Sec. 24 Tract CAB

Borehole Diam.(in) 6" Well Diam.(in) 2" Well Depth(ft) 32' Perforated Zone(s)(ft) 27-32'

Desc. of MP TOP OF STEEL Stick-up(ft) 1.92 SWL below MP(ft) 9.52 SWL below GS(ft) 8.6'

Aquifer Name SBC ALLUVIUM Aquifer Description (Lithology, Thickness, Depth to Top) SAND & GRAVEL

TEST DESCRIPTION

Test Type: (Circle One)
1. Pumping Well Drawdown
2. Observation Well Drawdown
3. Pumping Well Recovery
4. Observation Well Recovery
(5) Bailer Recovery
6. Slug Injection or Removal
7. Hvorslev Test
8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) — Pump hp. & type — Pump Depth(ft) —

Water Quality Sample Taken? yes (no) Specific Conductance (μmhos/cm @ 25°C) Temp(°C) Time

Avg. Discharge(gpm) 2.66 Test Duration(min) 4.5 Max WL Change(ft) 2.51 Transmissivity (gpd/ft) 100 — 1500

Storativity Hydraulic Conductivity(gpd/ft²) Specific Capacity(gpm/ft of drawdown)

REMARKS USED SKIBITZKE (1958)

Date & hour	Time (sec)	TIME days	Vn GALS	S.W.L.	s'	Vn/tn	T/T'	S.W.L. 15B
1-16-86 1537	0			9.52	0			9.77
BAILED								
24 BAILS								
@ 5 GALS								
UNTIL								
1541:30	270	.003125	12					
1542:00	300	.003472		12.03	2.51	3456	10	9.77
1542:50	350	.00405		10.22	.70	2963	4.375	
1543:30	390	.004514		9.77	.25	2658	3.25	
1544:00	420	.00486		9.65	.13	2469	2.33	
		T =	Vn/tn	=	3456	=	3456	= 109
			4π(s')		4π(2.51)		31.5	
			or					
		T =	2963	=	2963	=	337	
			4π(.70)		8.80			
			or					
		T =	2658	=	846			
			4π(.25)					
			or					
		T =	2469	=	1,511			
			4π(.13)					

AQUIFER TEST DATA

STILLER AND ASSOCIATES
CONSULTING HYDROLOGISTS · GEOLOGISTS · ENGINEERS

WELL OBSERVED (Data Reported on This Form) GS-15A
WELL TESTED GS-15A
TEST DATE 1-16-86

Project SBC CERCLA Personnel P. DUNLAVY

WELL DESCRIPTION

State MONTANA County SILVER BOW Location: T 3N R 8W Sec. 24 Tract CAB

Borehole Diam.(in) 6" Well Diam.(in) 2" Well Depth(ft) 32' Perforated Zone(s)(ft) 27'-32'

Desc. of MP TOP OF STEEL Stick-up(ft) 1.92 SWL below MP(ft) 9.52' SWL below GS(ft) 8.6'

Aquifer Name SBC ALLUVIUM Aquifer Description (Lithology, Thickness, Depth to Top) CLAYEY SAND AND GRAVEL

TEST DESCRIPTION

Test Type: (Circle One)
1. Pumping Well Drawdown
2. Observation Well Drawdown
3. Pumping Well Recovery
4. Observation Well Recovery
(5) Bailer Recovery
6. Slug Injection or Removal
7. Hvorslev Test
8. Other (Specify)

Distance of Observation Well from Pumping Well(ft) _____ Pump hp. & type _____ Pump Depth(ft) _____

Water Quality Sample Taken? yes no Specific Conductance (μmhos/cm @ 25°C) _____ Temp(°C) _____ Time _____

Avg. Discharge(gpm) 2.66 Test Duration(min) 7 Max WL Change(ft) 2.51' Transmissivity (gpd/ft) _____

Storativity _____ Hydraulic Conductivity(gpd/ft²) _____ Specific Capacity(gpm/ft of drawdown) _____

REMARKS BAILER RECOVERY TEST SKIBITZKE (1958) METHOD

Date & hour	Time (SEC.)	TIME / CYCLE	Volume / CYCLE	TIME (DAYS)	Vn/tn	RESIDUAL DRAWDOWN s'		
1-16-86 1537:00	0							
	11.25	11.25	.5 GAL					
	22.50	"	"					
	33.75	"	"					
	45.00	"	"					
	56.25	"	"					
	67.50	"	"					
	78.75	"	"					
	90.00	"	"					
	101.25	"	"					
	112.50	"	"					
	123.75	"	"					
	135.00	"	"					
	146.25	"	"					
	157.50	"	"					
	168.75	"	"					
	180.00	"	"					
	191.25	"	"					
	202.50	"	"					
	213.75	"	"					
	225.00	"	"					
	236.25	"	"					
	247.5	"	"					
	258.75	"	"					
1541:30	270	"	"					

GS-15A BAILER RECOVERY TEST CASE #1

TIME	TIME PER CYCLE	VOLUME	t_n (days)	V_n/t_n	S'
1537:00		.5 GAL			
1537:11.25	11.25 sec	.5 GAL	.00334	149.7	
1537:22.5	"	"	.00321	155.8	
1537:33.75			.00308	162.3	
1537:45.0			.00295	169.5	
1537:56.25			.00282	177.3	
			.00269	185.9	
			.00256	195.3	
			.00243	205.8	
			.00230	217.4	
			.00217	230.4	
			.00204	245.1	
			.00191	261.8	
			.00178	280.9	
			.00165	303.0	
			.00152	328.9	
			.00139	359.7	
			.00126	396.8	
			.00113	442.5	
			.000998	501.0	
			.000868	576.0	
			.000737	678.4	
			.000607	823.7	
			.000477	1048.2	
1541:30			.000347	1440.9	
1542:∞	$\frac{V_n}{t_n} + \frac{V_n}{t_n} \ldots \frac{V_n}{t_n} = 9536$				2.51

$$T = \frac{9536}{4\pi(2.51)} = 302$$

GS-15A BAILER RECOVERY TEST — CASE #2

TIME	TIME/CYCLE	VOLUME	t_n in days	V_n in ft	S'
1537:11.25	11.25	.5 GAL	.00438	114.	
1537:22.5			.00425	117.6	
1537:33.75			.00412	121.4	
1537:45.0			.00399	125.3	
1537:56.25			.00386	129.5	
1538:07.5			.00373	134.0	
1538:18.75			.00360	138.9	
1538:30			.00347	144.1	
1538:41.25			.00334	149.7	
1538:52.5			.00321	155.8	
1539:03.75			.00308	162.3	
1537:15.0			.00295	169.5	
1539:26.25			.00282	177.3	
1539:37.5			.00269	185.9	
1539:48.75			.00256	195.3	
1540:00			.00243	205.8	
1540:11.25			.00230	217.4	
1540:22.5			.00217	230.4	
1540:33.75			.00204	245.1	
1540:45.0			.00191	261.8	
1540:56.25			.00178	280.9	
1541:07.5			.00165	303.0	
1541:18.75			.00152	328.9	
1541:30			.00139	359.7	

1543:30

$$\frac{V_n}{t_n} + \frac{V_n}{t_n} \ldots \frac{V_n}{t_{n-1}} = 4642.5 \qquad T = \frac{4642.5}{4\pi(.25)} = 1478$$

.25'

K-Σ SEMI-LOGARITHMIC 3 CYCLES x 140 DIVISIONS
KEUFFEL & ESSER CO MADE IN U.S.A.

46 5810 CASE 3

GS-15A

JACOB METHOD

T/T'

V-189

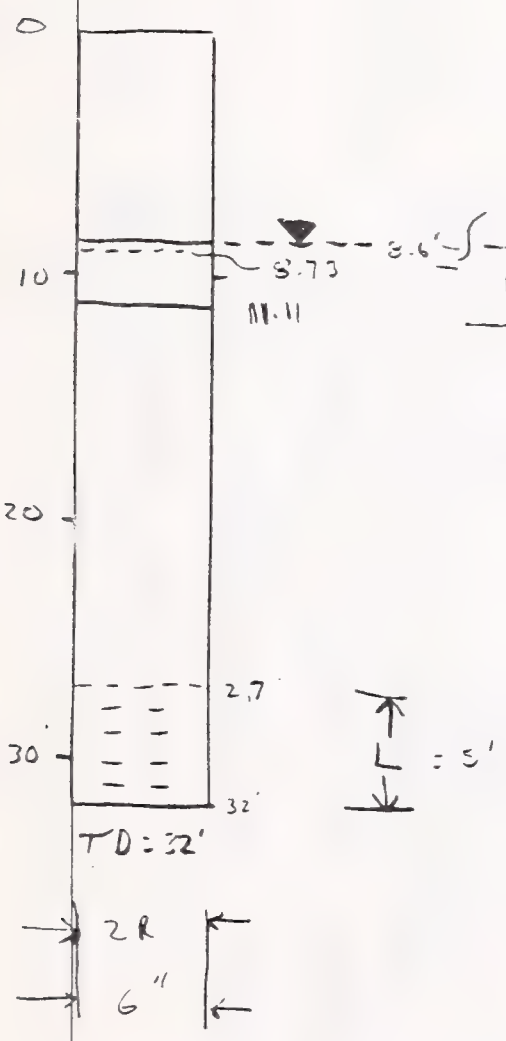
$T = \frac{264(5.33)}{1.9} = 1503$

$T = \frac{264.33}{2^\circ} = 1980$

T/T'

Hydraulic Conductivity Calculation Method C. from Cedergren

Well - GS-15A - Bail Recovery Data - 1/16/86



$$F = \frac{2\pi L}{\ln \frac{L}{R}} = \frac{2\pi(1.52\,m)}{\ln \frac{1.52}{.076}} =$$

$h_2 = .13' = .04\,m$

$h_1 = 2.51 = .77\,m$

$T_1 = 0$

$T_2 = 2\,min. = 120\,sec$

$R = 3''$

$.25'$

$R = .076\,m$

$$K = \frac{R^2}{2L(t_2 - t_1)} \ln \frac{L}{R} \ln \frac{h_1}{h_2}$$

$$= \frac{(.076\,m)^2}{2(1.52)(120)} \ln\left(\frac{1.52}{0.076}\right)\left(\ln \frac{.77}{.04}\right)$$

1.58×10^{-5} (3.0) (2.96)

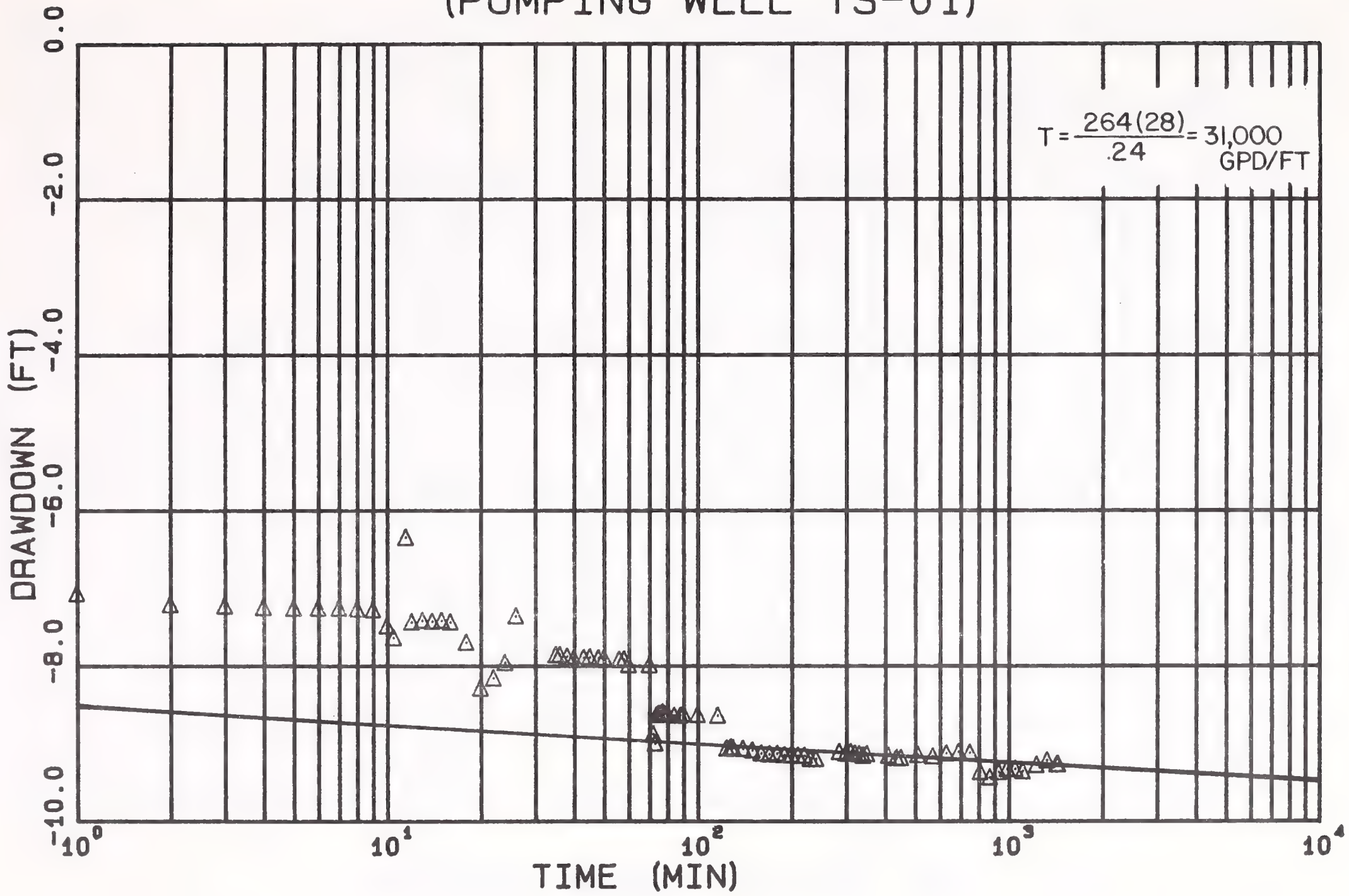
$K = 1.4 \times 10^{-4}\,m/sec$

$\left(\frac{1.4 \times 10^{-4}\,m}{sec}\right)\left(\frac{60\,sec}{min}\right)\left(\frac{60\,min}{hr}\right)\left(\frac{24\,hr}{day}\right)$ 1.21

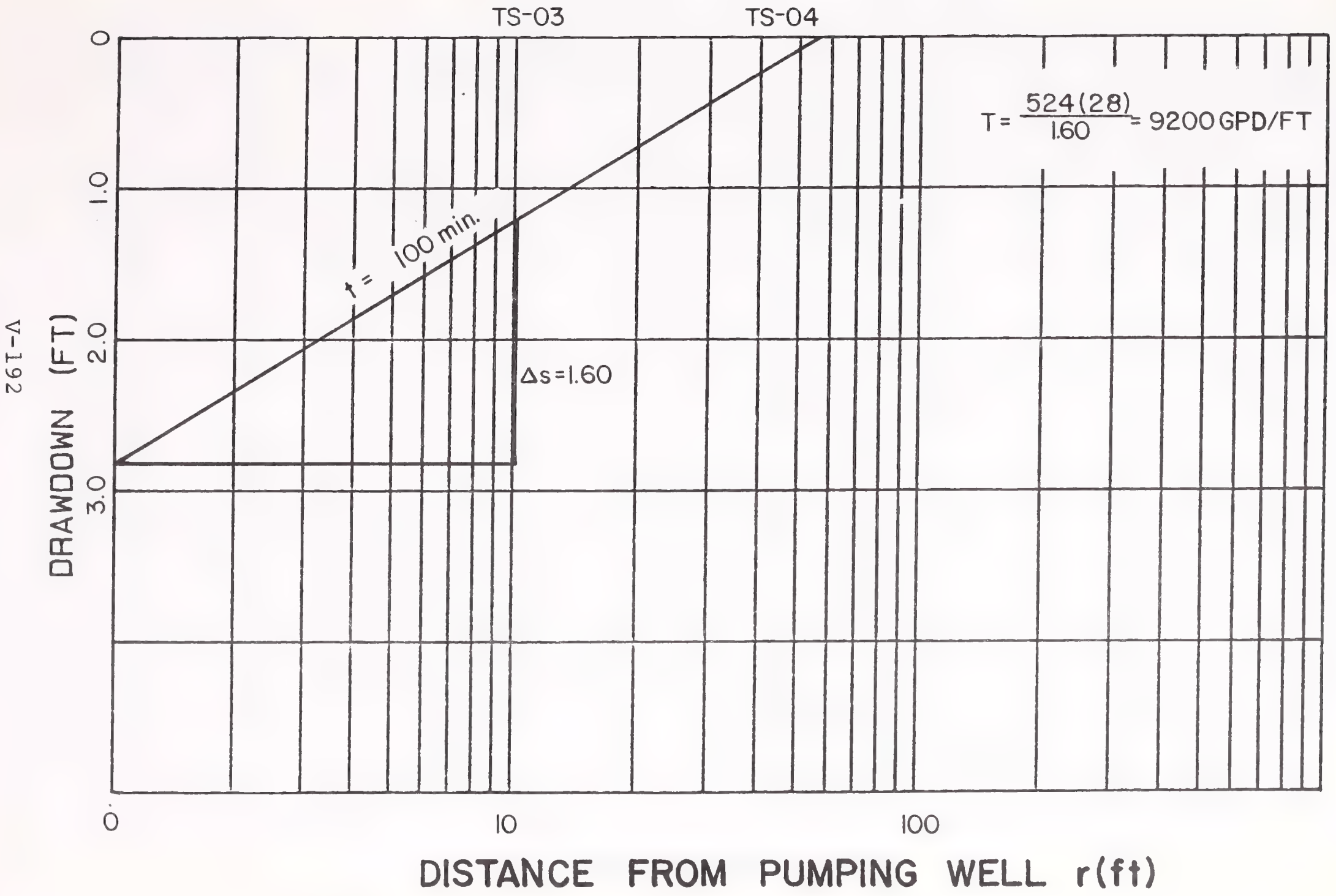
(8640.0) $K = 12.1\,m/day = 297\,gpd/ft^2$

$T = Kb$ $K = 297$ $b = 5'$ $T = 297 \times 5' = \underline{1485}\,gpd/ft$

JACOB DRAWDOWN TEST
OF MONITORING WELL TS-01
(PUMPING WELL TS-01)

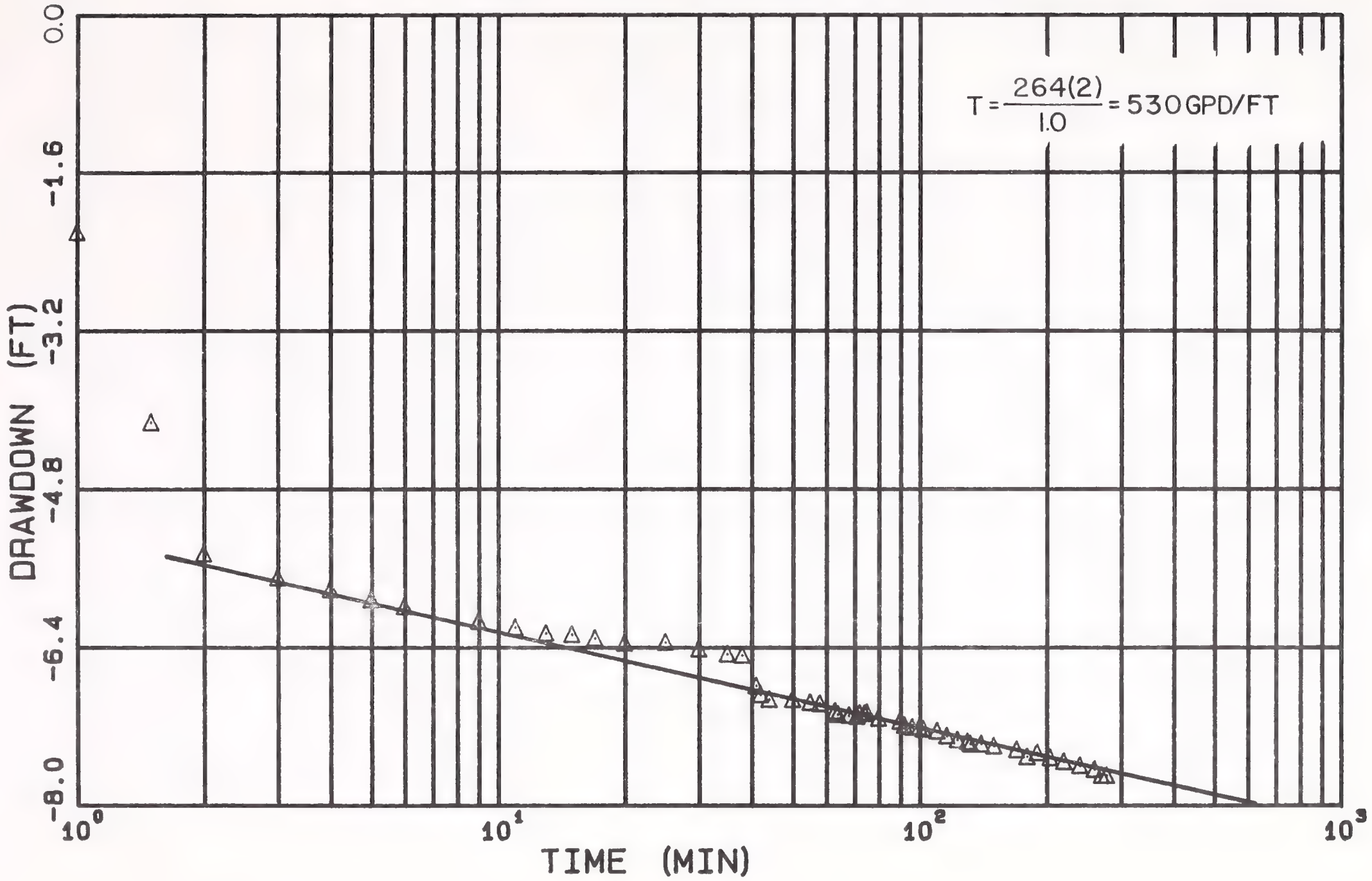


JACOB DRAWDOWN TEST OF OBSERVATION WELLS TS-03 AND TS-04



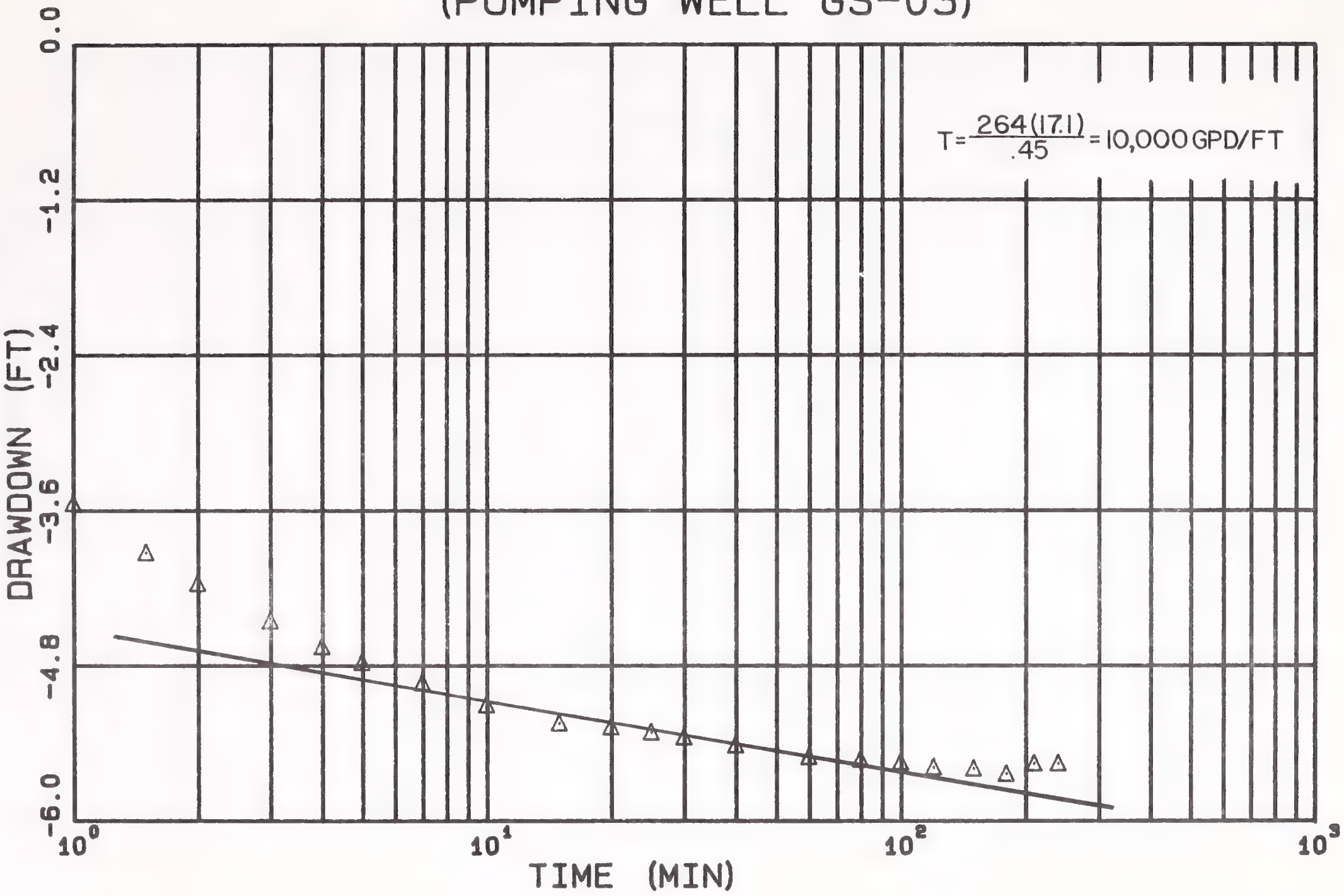
V-192

JACOB DRAWDOWN TEST
OF MONITORING WELL GS-01
(PUMPING WELL GS-01)



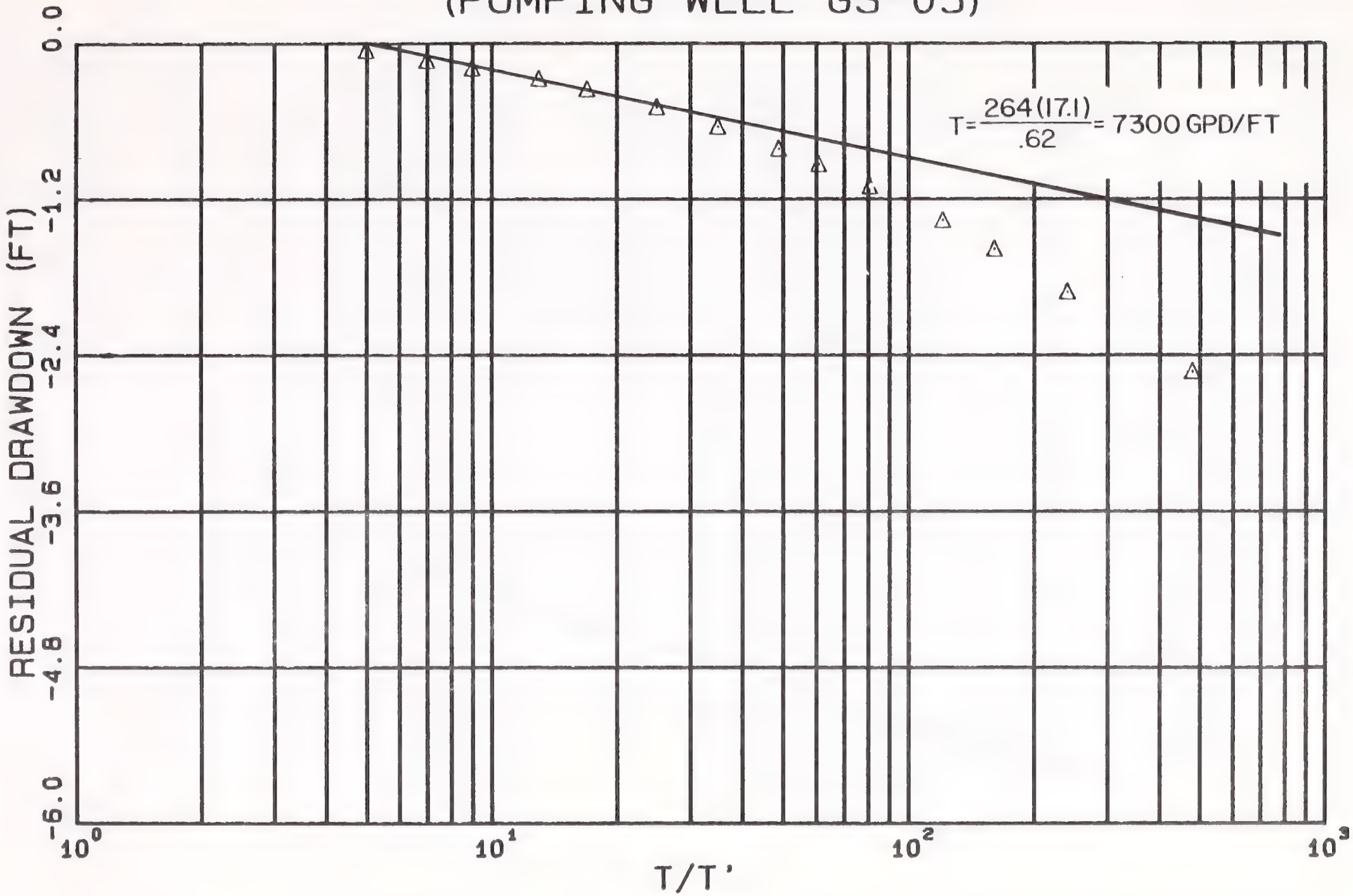
V-193

JACOB DRAWDOWN TEST
OF MONITORING WELL GS-03
(PUMPING WELL GS-03)



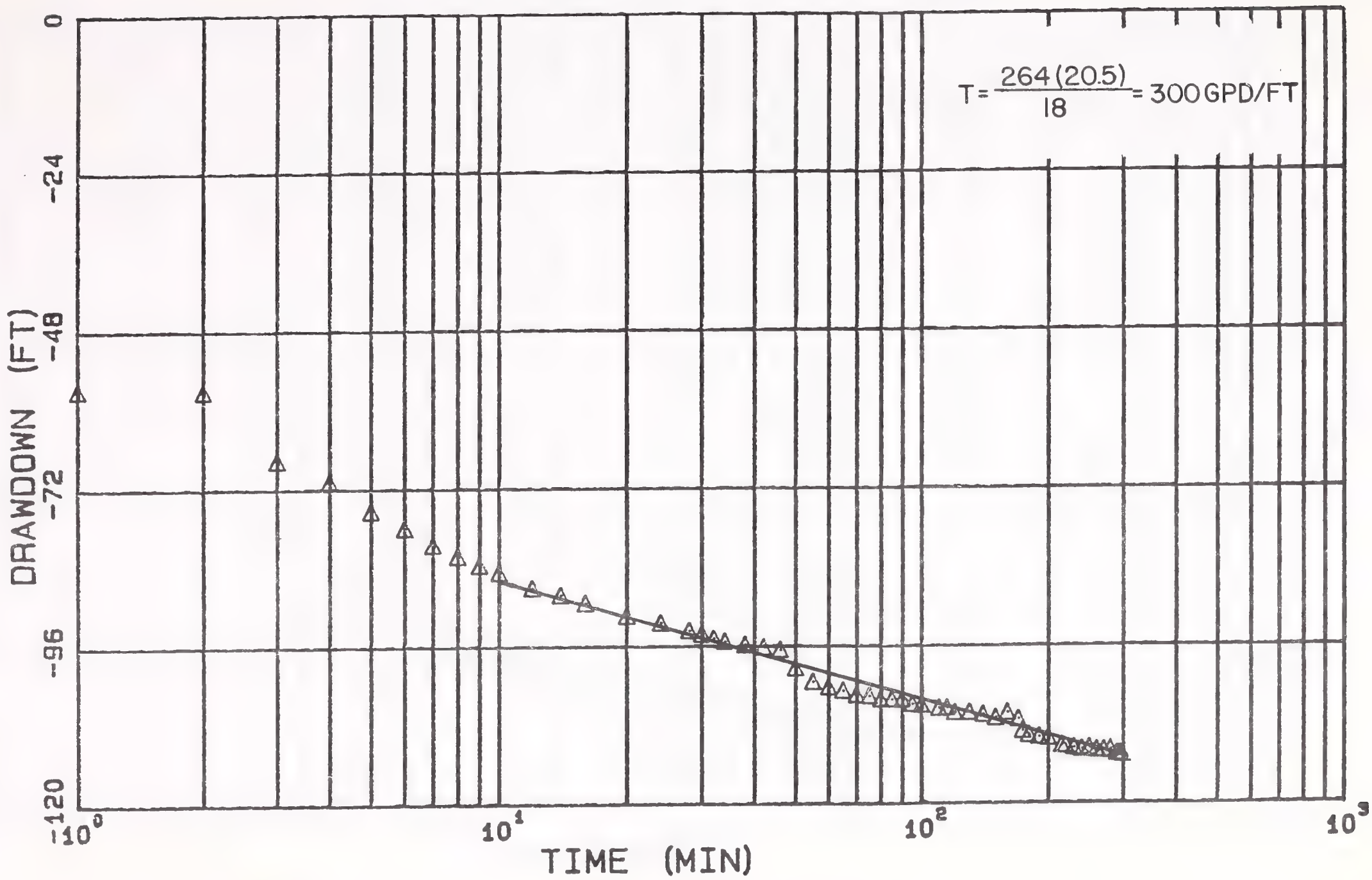
V-194

JACOB RECOVERY TEST
OF MONITORING WELL GS-03
(PUMPING WELL GS-03)

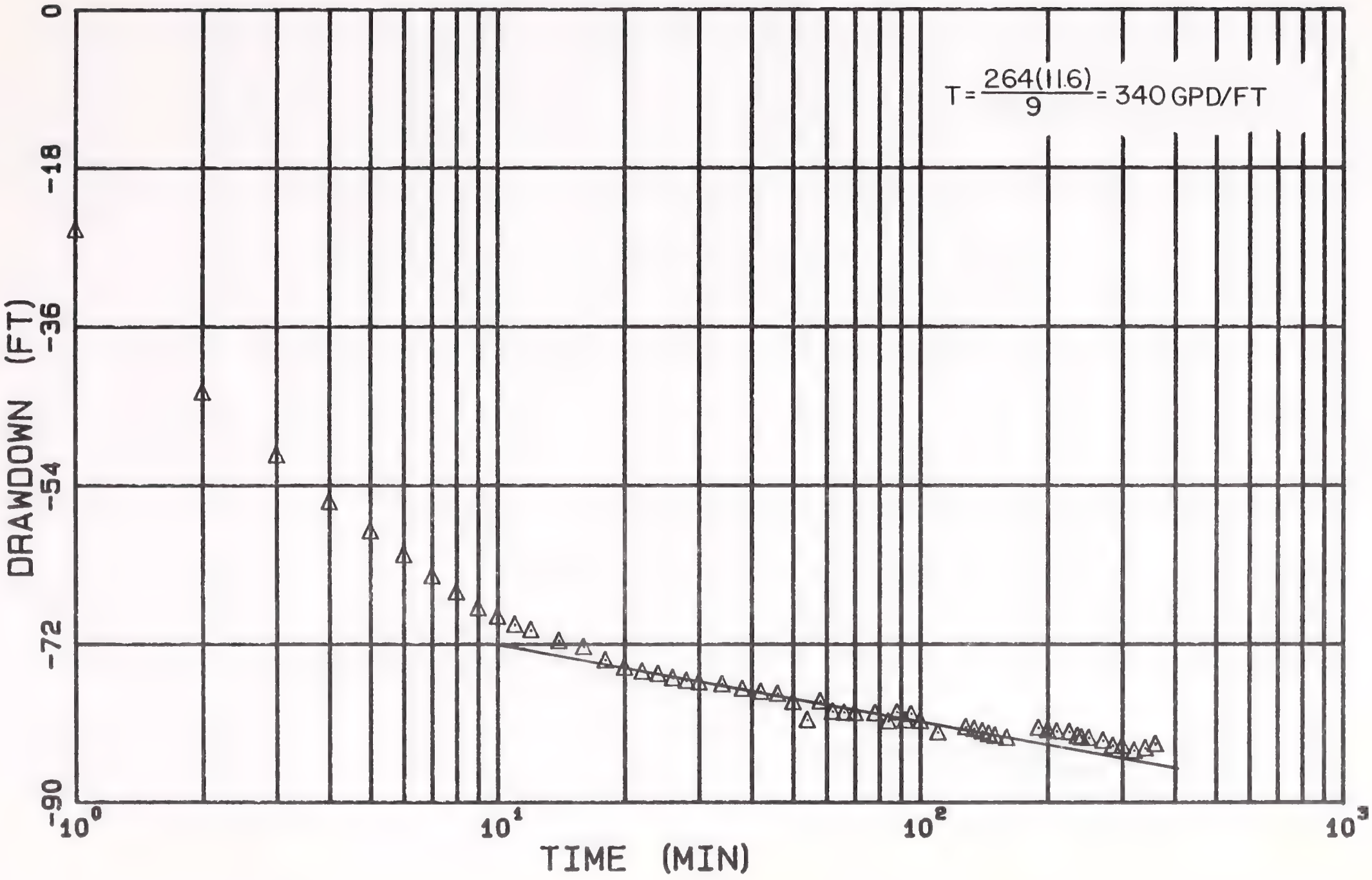


V-195

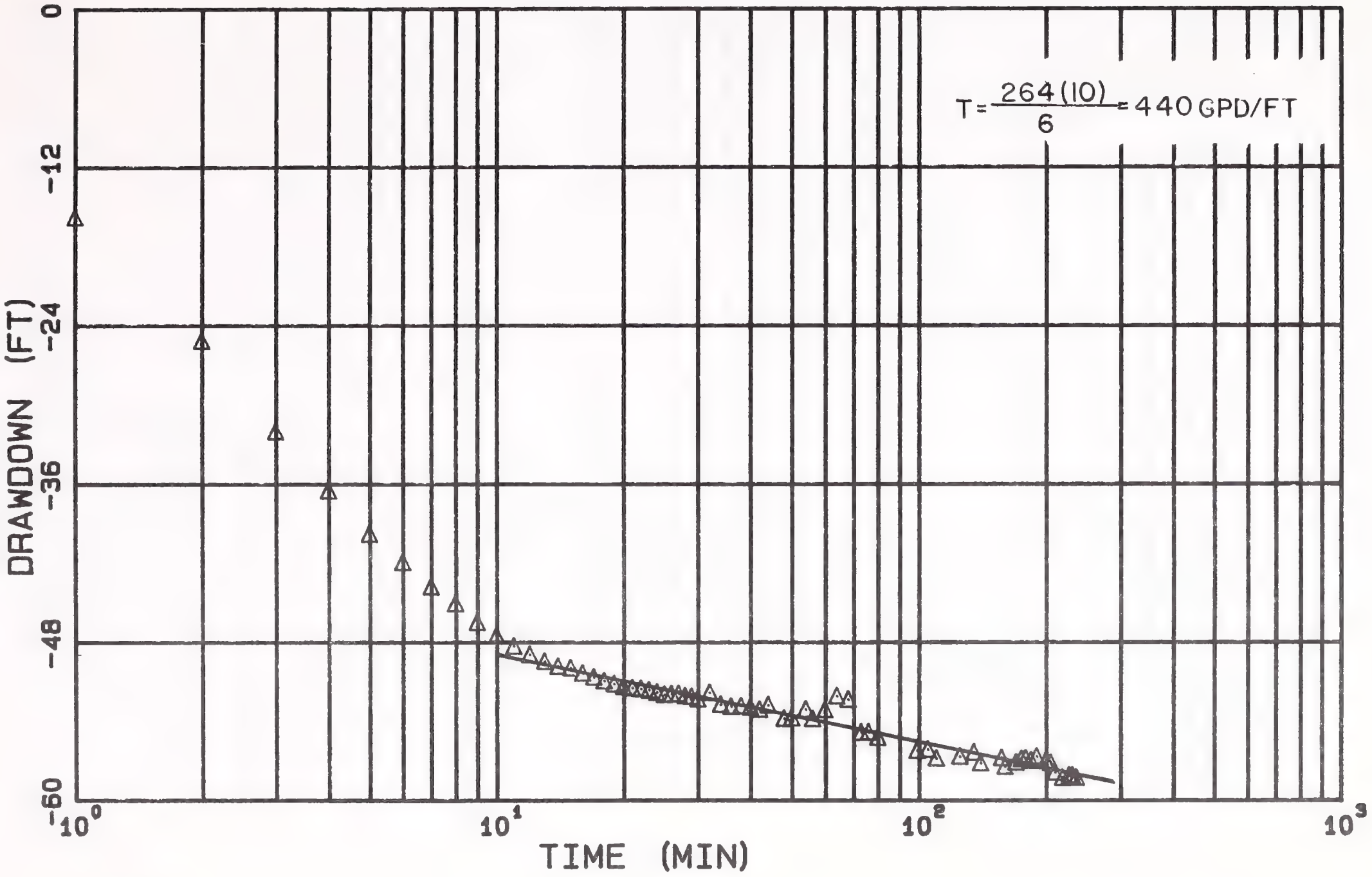
JACOB DRAWDOWN TEST
OF MONITORING WELL GS-07
(PUMPING WELL GS-07)



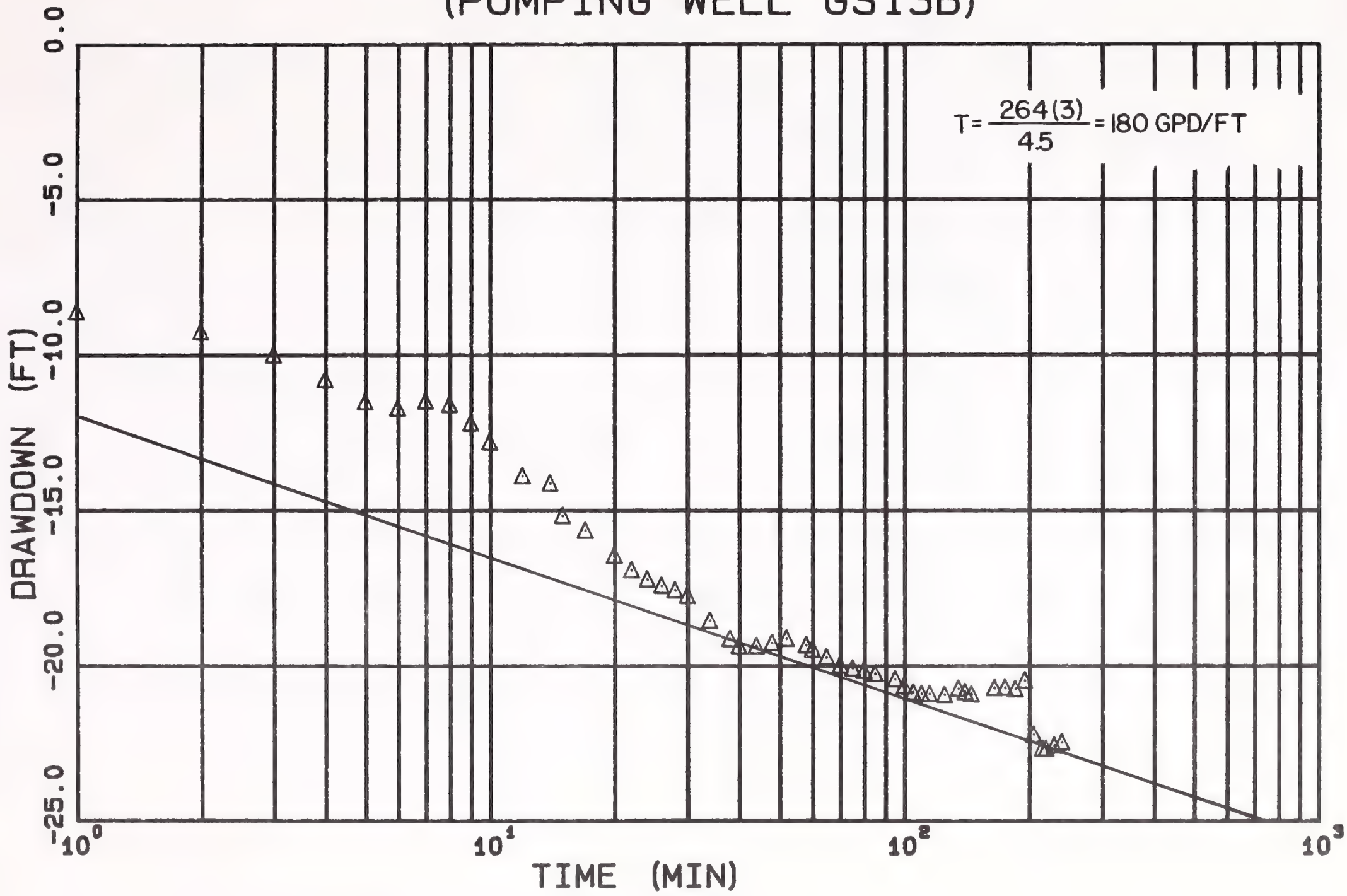
JACOB DRAWDOWN TEST
OF MONITORING WELL GS-08
(PUMPING WELL GS-08)



JACOB DRAWDOWN TEST
OF MONITORING WELL GS-09
(PUMPING WELL GS-09)



JACOB DRAWDOWN TEST
OF MONITORING WELL GS13B
(PUMPING WELL GS13B)



DRAFT

ATTACHMENT V-D
SILVER BOW CREEK RI SOIL WATER CONTENT,
NEUTRON PROBE DATA,
SOIL WATER POTENTIAL TENSIOMETER DATA,
AND PLOTS OF SOIL WATER VS. DEPTH

GROUND WATER TASKS COMPLETED

Tensiometer Data

Western Cluster

Number	Depth	06/11/85 Reading	06/19/85 Reading	06/28/85 Reading	07/24/85 Reading
TST-01 (East)	1.1 feet	14	16.4	17	17.0
02	2.1	18.5	18.4	19	19.0
03	3.3	19.0	20.5	20	20.5
04	4.1	18.0	17.0	18	21.0

Eastern Cluster

05	4.0	15.25 (1)	16	19.5
06	5.0	18.1	20	21.75
07	6.0	20.0	18	18.0

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP01
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	8	.3120	.3035	.3022	.2729	.2881	.3005
15- 30	23	.3532	.3409	.3449	.3337	.3529	.3394
30- 45	38	.3962	.3904	.3877	.3696	.3942	.3731
45- 60	53	.3603	.3529	.3465	.3871	.3780	.3761
60- 75	68	.4227	.4426	.4260	.3973	.4102	.4096
75- 90	83	.4617	.4663	.4648	.4916	.4952	.4735
90- 105	98	.5262	.5367	.5303	.5096	.5056	.5076
105- 120	113	.5321	.5379	.5313	.5496	.5429	.5433
120- 135	128	.5703	.5743	.5767	.5942	.5801	.5860
135- 150	143	.5185	.5196	.5159	.5428	.5435	.5309
150- 165	158	.5693	.5621	.5493	.5141	.5017	.5137
165- 180	173	.5400	.5207	.5302	.5981	.5804	.5744
180- 195	188	.4958	.4985	.5209	.5005	.4991	.4745

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP02
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	8	.1084	.1150	.0837	.1074	.1144	ERROR
15- 30	23	.1193	.1200	.1107	.1184	.1293	ERROR
30- 45	38	.1416	.1419	.1324	.1368	.1390	ERROR
45- 60	53	.1707	.1827	.1714	.1799	.1827	ERROR
60- 75	68	.1970	.2020	.1964	.2064	.1990	ERROR
75- 90	83	.1883	.1938	.2029	.2029	.2043	ERROR
90- 105	98	.2501	.2441	.2118	.2330	.2245	ERROR
105- 120	113	.2147	.2142	.2794	.2612	.2664	ERROR
120- 135	128	.1977	.1925	.2109	.2003	.1947	ERROR
135- 150	143	.3238	.3251	.2281	.2410	.2405	ERROR
150- 165	158	.4048	.4333	.3784	.3980	.4022	ERROR
165- 180	173	.4538	.5194	.5203	.5466	.5383	ERROR
180- 195	188	.4959	.4972	.4993	.4975	.4862	ERROR

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP03
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)				
DATE :		5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	8	.4928	.4799	.4992	.4943	.4861
15- 30	23	.4518	.4639	.4507	.4416	.4690
30- 45	38	.3968	.4008	.3717	.3817	.3887
45- 60	53	.4039	.4119	.4572	.4438	.4297
60- 75	68	.4749	.4865	.4203	.4428	.4556
75- 90	83	.5072	.5145	.5249	.5068	.5163
90- 105	98	.5174	.5205	.5314	.5313	.5558
105- 120	113	.2134	.5299	.5520	.5484	.5443
120- 135	128	.1918	.5751	.5433	.5514	.5475
135- 150	143	.3238	.5145	.7200	.7327	.7048
150- 165	158	.4316	.5478	.3773	.4003	.4000
165- 180	173	.5173	.5287	.5283	.5498	.5502
180- 195	188	.4952	.5195	.4977	.5004	.4969

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP04
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE : 5/14/85 5/25/85 6/12/85 7/26/85 8/7/85

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
0- 15	8	.4389	.4147	.4707	.3275	.3876	.4915
15- 30	23	.4215	.4272	.4811	.4027	.3961	.4198
30- 45	38	.4217	.4198	.4280	.4036	.3963	.4051
45- 60	53	.3899	.3822	.3758	.3780	.3660	.3771
60- 75	68	.4000	.4045	.3909	.3754	.3804	.3900
75- 90	83	.4872	.4922	.4591	.4297	.4296	.4246
90- 105	98	.5565	.5687	.5581	.5085	.4902	.5080
105- 120	113	.5979	.5928	.5731	.5687	.5732	.5722
120- 135	128	.6164	.6167	.5985	.6342	.6295	.6269
135- 150	143	.6236	.6186	.6238	.6302	.6194	.6266
150- 165	158	.6725	.6606	.6596	.6593	.6815	.6325
165- 180	173	.6812	.6715	.6512	.6988	.7452	.7562

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP05
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	8	.1590	.1556	.1569	.1206	.1296	.1407
15- 30	23	.3196	.3050	.3074	.2453	.2460	.3334
30- 45	38	.4233	.4310	.4613	.4168	.4472	
45- 60	53	.3859			.5228	.5355	
60- 75	68	.5308					
75- 90	83	.5582					
90- 105	98	.5576					

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP06
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	8	.1590	.3793	.3770	.2260	.2711	.3575
15- 30	23	.3196	.3900	.4097	.3616	.4133	.4173
30- 45	38	.4233	.4914	.4975	.4350	.4074	.4283
45- 60	53	.3853			.4748	.4744	.4876
60- 75	68	.5308			.5397	.5581	.5684
75- 90	83	.5582			.7235	.7300	
90- 105	98	.5576					

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP07
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	8	.3248	.2534	.3449	.1994	.2475	.3640
15- 30	23	.4301	.4339	.4562	.4102	.3986	.4101
30- 45	38	.4061	.4235	.4314	.3992	.4013	.4070
45- 60	53	.3666	.3725	.3768	.3697	.3692	.3648
60- 75	68	.3686	.4140	.4067	.4043	.3965	.3946
75- 90	83	.3867	.3689	.3723	.3689	.3547	.3708
90- 105	98	.3658	.4435	.4482	.4503	.4440	.4471
105- 120	113	.4599	.4841	.4858	.4799	.4709	.4783
120- 135	128	.4872	.4955	.4929	.5026	.4745	.4787
135- 150	143	.4704	.4787	.4770	.4748	.4623	.4672
150- 165	158	.3939	.4013	.4058	.4279	.4234	.4254
165- 180	173	.3780	.3775	.3746			
180- 195	188	.3883	.3585	.4278			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP08
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	8	.1614	.1766	.1997	.1651	.1773	.2087
15- 30	23	.1365	.1392	.1577	.1294	.1285	.1438
30- 45	38	.1376	.1437	.1497	.1266	.1298	.1436
45- 60	53	.1485	.1480	.1522	.1395	.1345	.1395
60- 75	68	.2026	.1794	.2030	.1776	.1891	.2148
75- 90	83	.3086	.3440	.4400	.2927	.3137	
90- 105	98	.4315			.4944	.5045	

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP09
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	.1899	.2778	.1929	.1655	.1942	.2114
15- 30	23	.2736	.2892	.2865	.2686	.2852	.3001
30- 45	38	.2871	.2731	.2840	.2961	.2795	.2803
45- 60	53	.3538	.3506	.3819	.3181	.3271	.3577
60- 75	68	.4732	.4737	.4787	.4883	.4828	.4843
75- 90	83	.5327	.5304	.5158	.5160	.5345	.5287
90- 105	98	.5495	.5505	.5510	.5702	.5569	.5585
105- 120	113	.5409	.5417	.5419	.5770	.5576	.5530
120- 135	128	.5529	.5557	.5624	.4991	.4774	.0270
135- 150	143	.5553	.4730	.4688	.4715	.4651	.0270
150- 165	158	.5712	.3966	.3989	.4249	.4260	.0270
165- 180	173	.3763	.3732	.3683			
180- 195	188	.3865	.3544	.4205			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP10
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE : 5/14/85 5/25/85 6/13/85 7/26/85 8/7/85 9/26/85

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
0- 15	8	.4002	.4170	.3994	.3701	.3933	.4124
15- 30	23	.4393	.4312	.4428	.3987	.3886	.4030
30- 45	38	.3592	.3453	.3614	.3187	.3108	.3278
45- 60	53	.3477	.3341	.3518	.3227	.3293	.3470
60- 75	68	.2027	.2085	.2089	.2144	.1971	.1895
75- 90	83	.1243	.1198	.1366	.1242	.1389	.1415
90- 105	98	.1101	.1090	.1279	.1191	.1339	.1436
105- 120	113	.1319	.1524	.1610	.1378	.1576	.1774
120- 135	128	.4192	.4522	.4920	.4032	.4312	.4625
135- 150	143	.5786	.5777	.5606	.5683	.5784	.5761
150- 165	158	.5980	.5900	.5847	.6316	.6330	.5848
165- 180	173	.5668	.5805	.5638			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP11
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE : 5/14/85 5/25/85 6/12/85 7/26/85 8/7/85 9/26/85

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
0- 15	8	.2884	.2884	.3012	.2436	.2985	.2910
15- 30	23	.2703	.2718	.2900	.2507	.2823	.2761
30- 45	38	.2294	.2293	.2481	.2310	.2531	.2328
45- 60	53	.1518	.1478	.1681	.1575	.1842	.1620
60- 75	68	.1259	.1237	.1543	.1407	.1653	.1488
75- 90	83	.1257	.1236	.1436	.1307	.1598	.1393
90- 105	98	.2439	.2519	.3145	.1958	.2386	.2316
105- 120	113	.4436	.4360	.4431	.4519	.4461	.4332
120- 135	128	.4459	.4466	.4370	.4586	.4526	.4406
135- 150	143	.4100	.4175	.4184	.4108	.4226	.4100
150- 165	158	.3038	.3045	.3050	.3099	.3152	.3113
165- 180	173	.2673	.3222	.3064	.3240	.3216	.3172
180- 195	188	.1785					
195- 210	203	.2956					
210- 225	218	.4961					

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP12
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	.3647	.3157	.2782	.2632	.3129	.3305
15- 30	23	.4924	.4692	.4229	.4477	.4867	.4823
30- 45	38	.4981	.4805	.4867	.4944	.4853	.5727
45- 60	53	.4936	.5041	.4934	.5061	.5262	.5205
60- 75	68	.4371	.4585	.4418	.4374	.4241	.4161
75- 90	83	.4281	.4170	.4023	.3987	.4267	.4563
90- 105	98	.5629	.5557	.5397	.5509	.5449	.5462
105- 120	113	.5725	.5664	.5719	.5869	.5865	.5753
120- 135	128	.4853	.4858	.4806	.5086	.4965	.4976
135- 150	143	.4585	.4608	.4963	.4705	.4599	.4698
150- 165	158	.4985	.4994	.5050	.4939	.4983	.4993
165- 180	173	.4160	.4184	.4319	.5142	.5116	.5011
180- 195	188	.3900	.3914	.4089			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP13
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
	DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	.4148	.3682	.3534	.3249	.3440	.3406
15- 30	23	.4644	.4259	.3941	.3891	.3892	.3870
30- 45	38	.5183	.5020	.5043	.4979	.5079	.5019
45- 60	53	.5664	.5183	.5180	.5107	.5166	.5010
60- 75	68	.4987	.4869	.4733	.4376	.4540	.4479
75- 90	83	.4388	.4606	.4645	.4367	.4450	.4490
90- 105	98	.4956	.5153	.5180	.5034	.5237	.5102
105- 120	113	.5765	.5676	.5623	.5708	.5835	.5716
120- 135	128	.5203	.5245	.5282	.5353	.5479	.5269
135- 150	143	.3731	.3730	.3973	.3835	.3940	.3686
150- 165	158	.2624	.2606	.2611	.2515	.2664	.2523
165- 180	173	.2464	.2381	.2457	.2214	.2294	.2353
180- 195	188	.3048	.2743	.3254			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP14
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
	DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	.3994	.3879	.4079	.3403	.3909	.3932
15- 30	23	.4412	.4375	.4294	.4232	.4235	.4125
30- 45	38	.4488	.4621	.4584	.4344	.4396	.4480
45- 60	53	.4542	.4501	.4527	.4174	.4447	.4347
60- 75	68	.2992	.2904	.3002	.3108	.3104	.2910
75- 90	83	.3026	.3164	.3145	.2861	.2952	.3060
90- 105	98	.4743	.4664	.4894	.4527	.4658	.4673
105- 120	113	.5296	.5315	.5369	.5374	.5509	.5240
120- 135	128	.5969	.5888	.5781	.5566	.5714	.5730
135- 150	143	.5665	.5705	.5669	.5792	.5756	.5648
150- 165	158	.5505	.5472	.5455	.5502	.5546	.5502
165- 180	173	.5454	.5543	.5465	.5800	.6066	.5779
180- 195	188	.5453	.5478	.5451			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP15
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE : 5/14/85 5/25/85 6/13/85 7/26/85 8/7/85 9/26/85

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
0- 15	8	.1478	.1580	.1625	.1224	.1581	.1726
15- 30	23	.3595	.3583	.3480	.2820	.3175	.3538
30- 45	38	.4086	.4106	.4150	.4121	.4182	.4225
45- 60	53	.5039	.5140	.5008	.4748	.4897	.5169
60- 75	68	.5389	.5439	.5407	.5382	.5453	.5516
75- 90	83	.5273	.5356	.5280	.5424	.5193	.5395
90- 105	98	.5420	.5462	.5476	.5376	.5435	.5455
105- 120	113	.5430	.5457	.5376	.5473	.5426	.5511
120- 135	128	.5516	.5501	.5472	.5654	.5554	.5676
135- 150	143	.4253	.4773	.4595	.5326	.5382	.5203
150- 165	158	.3528	.3499	.3745	.3512	.3382	.3865
165- 180	173	.4909	.4918	.5100	.5383	.5568	.5851
180- 195	188	.3799	.4098	.4574			
195- 210	203	.4861	.5098	.5346			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP16
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	.4002	.3924	.3944	.3331	.3648	.3725
15- 30	23	.3763	.3746	.3789	.3685	.3705	.3701
30- 45	38	.3727	.3706	.3759	.3516	.3566	.3621
45- 60	53	.4948	.4919	.4978	.4827	.4984	.5049
60- 75	68	.4941	.5042	.5182	.5314	.5191	.5093
75- 90	83	.5218	.5104	.5149	.5045	.5230	.4985
90- 105	98	.5514	.5467	.5492	.5373	.5474	.5504
105- 120	113	.5609	.5538	.5559	.5753	.5616	.5592
120- 135	128	.5573	.5562	.5630	.5508	.5641	.5570
135- 150	143	.5726	.5755	.5744	.5792	.5874	.5776
150- 165	158	.5512	.5498	.5627	.6213	.5846	.5952
165- 180	173	.5358	.5329	.5652			
180- 195	188	.5310	.5286	.5379			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP17
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	.2631	.2557	.2695	.1966	.2489	.2516
15- 30	23	.4021	.4078	.4156	.3896	.4189	.4089
30- 45	38	.4600	.4418	.4468	.4557	.4733	.4552
45- 60	53	.4399	.4198	.4154	.3836	.4135	.4053
60- 75	68	.4910	.5038	.4943	.5028	.5081	.5051
75- 90	83	.5273	.5184	.5140	.5137	.5149	.5201
90- 105	98	.5226	.5189	.5176	.5097	.5182	.5253
105- 120	113	.5394	.5380	.5417	.5195	.5507	.5290
120- 135	128	.5768	.5733	.5754	.5603	.5682	.5713
135- 150	143	.5780	.5833	.5752	.5819	.5858	.5597
150- 165	158	.5640	.5846	.5759	.5862	.5861	.5965
165- 180	173	.4853	.4779	.4891	.5633	.5744	.5745
180- 195	188	.5793	.5636	.5558			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP18
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	.2010	.1875	.1739	.1456	.1492	.1625
15- 30	23	.3965	.3351	.3163	.3142	.3032	.3357
30- 45	38	.5041	.4878	.4853	.4900	.4865	.4696
45- 60	53	.4684	.4748	.4649	.4772	.4725	.4705
60- 75	68	.5286	.5391	.5297	.5440	.5327	.5326
75- 90	83	.4810	.4972	.5078	.5231	.5176	.4991
90- 105	98	.3700	.4142	.4187	.4575	.4595	.4379
105- 120	113	.2513	.5350	.3303	.3192	.3016	.4188
120- 135	128	.2814	.5702	.3931	.4144	.4097	.4129
135- 150	143	.1609	.5801	.5723	.2640	.2642	.2459
150- 165	158	.1399	.5814	.5730	.1661	.1518	
165- 180	173	.1547	.4754	.4866	.1357	.1318	
180- 195	188	.2624	.5606	.5530	.1752	.1839	

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP19
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	.3012	.3015	.2896	.2667	.3049	.3171
15- 30	23	.4811	.4862	.4745	.4779	.4750	.4938
30- 45	38	.4101	.4124	.4028	.3930	.4045	.4066
45- 60	53	.4782	.4706	.4747	.5406	.4535	.4560
60- 75	68	.5285	.5473	.5380	.5126	.5348	.5291
75- 90	83	.5564	.5639	.5664	.5667	.5479	.5532
90- 105	98	.5635	.5675	.5618	.5564	.5639	.5552
105- 120	113	.5661	.5663	.5605	.5604	.5580	.5693
120- 135	128	.5059	.4668	.5000	.5074	.5221	.5079
135- 150	143	.2959	.2793	.2951	.2736	.2732	.2726
150- 165	158	.5144	.5070	.5227	.4824	.4932	.5026
165- 180	173	.4879	.4991	.5036	.5055	.5079	.4876
180- 195	188	.6423	.6848	.6467	.4678	.4529	.4310

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP20
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	.3763	.3609	.3453	.3401	.3703	.3706
15- 30	23	.4384	.4222	.4189	.4394	.4470	.4335
30- 45	38	.5046	.4999	.4911	.5066	.5010	.5082
45- 60	53	.5468	.5517	.5343	.5357	.5401	.5273
60- 75	68	.5631	.5383	.5460	.5616	.5508	.5464
75- 90	83	.5655	.5006	.5425	.5543	.5419	.5238
90- 105	98	.5032	.4774	.5072	.5239	.5019	.4942
105- 120	113	.4757	.5050	.4972	.4963	.4839	.4845
120- 135	128	.5055	.4811	.5170	.5370	.5311	.5067
135- 150	143	.4836	.5126	.4929	.4739	.4816	.4694
150- 165	158	.5078	.5266	.5370	.5347	.5352	.5045
165- 180	173	.5079	.5462	.6001	.4321	.4122	.4032

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP21
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	.3784	.3062	.2972	.3675	.3993	.3960
15- 30	23	.4172	.4132	.4084	.3844	.3797	.3800
30- 45	38	.4549	.4335	.4337	.4492	.4506	.4541
45- 60	53	.5070	.4956	.4958	.5367	.5339	.5335
60- 75	68	.5789	.5675	.5591	.5829	.5744	.5701
75- 90	83	.6249	.6136	.6172	.6308	.6146	.6117
90- 105	98	.6069	.6173	.6117	.6180	.6210	.6130
105- 120	113		.5957	.5919	.5851	.5862	.5638
120- 135	128		.4807	.4980	.4133	.3807	.3615
135- 150	143		.3365	.3471	.2670	.2549	.2517
150- 165	158		.4342	.4924	.3642	.3789	.3875
165- 180	173				.5068		

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP21A
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	.4182	.4108	.4259	.2732	.3752	.4113
15- 30	23	.4994	.5067	.5368	.4401	.5343	.5409
30- 45	38	.4714	.4739	.5161	.4257	.5389	.5483
45- 60	53	.4453	.4656	.5303	.4303	.5152	.5279
60- 75	68	.4867	.5055	.5560	.4793	.5404	.5466
75- 90	83	.5130	.5279	.5671	.5190	.5732	.5763
90- 105	98	.5568	.5558	.5780	.5696	.5746	.5804
105- 120	113	.5757	.5617	.5652			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP22
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	.3098	.2984	.2946	.2496	.2680	.2921
15- 30	23	.3662	.3641	.3694	.3383	.3463	.3688
30- 45	38	.4493	.4352	.4450	.3871	.3929	.4185
45- 60	53	.5583	.5589	.5507	.5356	.5419	.5457
60- 75	68	.5264	.5238	.5172	.5404	.5315	.5229
75- 90	83	.4763	.4684	.4717	.4621	.4671	.4662
90- 105	98	.5277	.5157	.5221	.5094	.5085	.5166
105- 120	113	.5243	.5256	.5010	.5384	.5410	.5438
120- 135	128	.4913	.4863	.4917	.4742	.4613	.4625
135- 150	143	.5606	.5446	.5499	.5489	.5430	.5385
150- 165	158	.5051	.5004	.4950	.5580	.5475	.5189
165- 180	173	.5126	.4736	.4317	.4083	.3970	.3995
180- 195	188	.5505		.4554			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP23
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (G/CM3)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	.4511	.4600	.4583	.2957	.3020	.3452
15- 30	23	.4191	.4425	.4067	.4876	.4812	.4828
30- 45	38	.4615	.4353	.4425	.4066	.4104	.4077
45- 60	53	.4984	.4708	.4966	.5210	.5266	.5196
60- 75	68	.4316	.4322	.4270	.4216	.4079	.3966
75- 90	83	.5437	.5451	.5383	.5207	.5331	.5301
90- 105	98	.5565	.5616	.5505	.5445	.5514	.5607
105- 120	113	.4199	.3924	.3925	.5269	.5149	.4865
120- 135	128	.5303	.5375	.5300	.4230	.4217	.4430
135- 150	143	.5533	.5592	.5451	.5564	.5545	.5554
150- 165	158	.5598	.5527	.5426	.5570	.5536	.5567
165- 180	173	.4551	.4135	.4014	.5410	.5500	.5342
180- 195	188		.3585	.3673			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP24
PROJECT NAME: SILVER BOW CREEK TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (%)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	.3181	.3192	.2954	.2012	.2587	.2886
15- 30	23	.4446	.4414	.4371	.4807	.4698	.4424
30- 45	38	.4549	.4418	.4494	.4150	.4443	.4644
45- 60	53	.5881	.5752	.5709	.5855	.5690	.5809
60- 75	68	.5596	.5424	.5551	.5806	.5682	.5700
75- 90	83	.4770	.4632	.4711	.5423	.5109	.4942
90- 105	98	.2657	.2560	.2490	.3058	.3007	.2714
105- 120	113	.2475	.2478	.2378	.2609	.2629	.2637
120- 135	128	.1628	.1573	.1602	.1782	.1719	.1679
135- 150	143	.1662	.1673	.1651	.1696	.1705	.1699
150- 165	158	.1530	.1489	.1519	.1610	.1537	.1526
165- 180	173	.1571	.1547	.1536	.1589	.1491	.1548
180- 195	188	.2122	.1900	.1968	.1695	.1638	.1665
195- 210	203	.3808	.3207	.3871	.2041	.2195	.2170

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP01
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	8	1.842	1.792	1.785	1.612	1.701	1.774
15- 30	23	2.086	2.013	2.037	1.971	2.084	2.004
30- 45	38	2.340	2.306	2.290	2.182	2.328	2.203
45- 60	53	2.128	2.084	2.046	2.286	2.232	2.221
60- 75	68	2.496	2.614	2.516	2.346	2.423	2.419
75- 90	83	2.727	2.754	2.745	2.903	2.924	2.796
90- 105	98	3.108	3.170	3.132	3.009	2.986	2.998
105- 120	113	3.142	3.177	3.138	3.246	3.206	3.208
120- 135	128	3.368	3.391	3.406	3.509	3.426	3.460
135- 150	143	3.062	3.068	3.047	3.205	3.210	3.135
150- 165	158	3.362	3.319	3.244	3.036	2.963	3.034
165- 180	173	3.189	3.075	3.131	3.532	3.428	3.392
180- 195	188	2.928	2.944	3.076	2.956	2.947	2.802
SUM :		35.776	35.706	35.590	35.795	35.799	35.449

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP02
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)				
DATE :		5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	8	.640	.679	.494	.634	.676
15- 30	23	.705	.709	.654	.699	.763
30- 45	38	.836	.838	.782	.808	.821
45- 60	53	1.008	1.079	1.012	1.063	1.079
60- 75	68	1.164	1.193	1.160	1.219	1.175
75- 90	83	1.112	1.145	1.198	1.198	1.207
90- 105	98	1.477	1.442	1.251	1.376	1.326
105- 120	113	1.268	1.265	1.650	1.542	1.574
120- 135	128	1.167	1.137	1.245	1.183	1.150
135- 150	143	1.912	1.920	1.347	1.423	1.420
150- 165	158	2.391	2.559	2.235	2.350	2.375
165- 180	173	2.680	3.068	3.072	3.228	3.179
180- 195	188	2.929	2.936	2.949	2.938	2.871
SUM :		19.287	19.968	19.050	19.662	19.616

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP03
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)				
DATE :		5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	8	2.910	2.834	2.948	2.919	2.871
15- 30	23	2.668	2.740	2.661	2.608	2.770
30- 45	38	2.343	2.367	2.195	2.254	2.295
45- 60	53	2.385	2.433	2.700	2.621	2.538
60- 75	68	2.804	2.873	2.482	2.615	2.691
75- 90	83	2.995	3.038	3.100	2.993	3.049
90- 105	98	3.055	3.074	3.138	3.137	3.282
105- 120	113	1.260	3.129	3.260	3.239	3.214
120- 135	128	1.133	3.396	3.209	3.256	3.233
135- 150	143	1.912	3.038	4.252	4.327	4.162
150- 165	158	2.549	3.235	2.228	2.364	2.362
165- 180	173	3.055	3.122	3.120	3.247	3.249
180- 195	188	2.924	3.068	2.939	2.955	2.934
SUM :		31.996	38.348	38.233	38.536	38.651

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP04
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE : 5/14/85 5/25/85 6/12/85 7/26/85 8/7/85

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
0- 15	8	2.592	2.449	2.780	1.934	2.289	2.902
15- 30	23	2.489	2.523	2.841	2.378	2.339	2.479
30- 45	38	2.490	2.479	2.527	2.384	2.340	2.392
45- 60	53	2.302	2.257	2.219	2.232	2.161	2.227
60- 75	68	2.362	2.389	2.308	2.217	2.246	2.303
75- 90	83	2.877	2.906	2.711	2.538	2.537	2.508
90- 105	98	3.286	3.359	3.296	3.003	2.895	3.000
105- 120	113	3.531	3.501	3.384	3.359	3.385	3.379
120- 135	128	3.640	3.642	3.535	3.745	3.718	3.702
135- 150	143	3.683	3.653	3.684	3.721	3.658	3.700
150- 165	158	3.972	3.901	3.895	3.893	4.024	3.735
165- 180	173	4.023	3.965	3.846	4.127	4.401	4.466
	SUM :	37.248	37.024	37.026	35.533	35.995	36.795

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP05
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	8	.939	.919	.926	.712	.765	.831
15- 30	23	1.887	1.801	1.815	1.448	1.453	1.969
30- 45	38	2.500	2.545	2.724	2.462	2.641	
45- 60	53	2.279			3.088	3.163	
60- 75	68	3.135					
75- 90	83	3.297					
90- 105	98	3.293					
SUM :		17.328	5.263	5.464	7.715	8.027	2.806

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP06
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	8	.939	2.240	2.227	1.335	1.601	2.111
15- 30	23	1.887	2.303	2.420	2.136	2.441	2.464
30- 45	38	2.500	2.902	2.938	2.569	2.406	2.529
45- 60	53	2.279			2.804	2.802	2.879
60- 75	68	3.135			3.187	3.296	3.357
75- 90	83	3.297			4.273	4.311	
90- 105	98	3.293					
SUM :		17.328	7.443	7.582	16.307	16.860	13.345

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP07
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	8	1.918	1.497	2.037	1.178	1.462	2.150
15- 30	23	2.540	2.562	2.694	2.423	2.354	2.422
30- 45	38	2.398	2.501	2.548	2.357	2.370	2.403
45- 60	53	2.165	2.200	2.225	2.183	2.180	2.155
60- 75	68	2.177	2.445	2.402	2.387	2.341	2.330
75- 90	83	2.284	2.178	2.198	2.179	2.095	2.189
90- 105	98	2.160	2.619	2.647	2.659	2.622	2.640
105- 120	113	2.716	2.859	2.869	2.834	2.781	2.824
120- 135	128	2.877	2.926	2.911	2.968	2.802	2.827
135- 150	143	2.778	2.827	2.817	2.804	2.730	2.759
150- 165	158	2.326	2.370	2.396	2.527	2.500	2.512
165- 180	173	2.233	2.230	2.212			
180- 195	188	2.293	2.117	2.526			
SUM :		30.865	31.330	32.482	26.501	26.240	27.214

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP08
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	8	.953	1.043	1.179	.975	1.047	1.232
15- 30	23	.806	.822	.931	.764	.759	.849
30- 45	38	.813	.849	.884	.747	.767	.848
45- 60	53	.877	.874	.899	.824	.794	.824
60- 75	68	1.196	1.059	1.199	1.049	1.117	1.268
75- 90	83	1.822	2.032	2.598	1.728	1.852	
90- 105	98	2.548			2.919	2.979	
SUM :		9.014	6.677	7.689	9.011	9.319	5.027

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP09
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	1.121	1.641	1.139	.977	1.147	1.248
15- 30	23	1.616	1.708	1.692	1.586	1.684	1.772
30- 45	38	1.695	1.613	1.677	1.748	1.651	1.655
45- 60	53	2.090	2.070	2.255	1.878	1.932	2.113
60- 75	68	2.794	2.797	2.827	2.884	2.851	2.860
75- 90	83	3.146	3.132	3.046	3.047	3.156	3.122
90- 105	98	3.245	3.251	3.254	3.367	3.289	3.298
105- 120	113	3.194	3.199	3.200	3.408	3.293	3.266
120- 135	128	3.265	3.282	3.321	2.948	2.819	.159
135- 150	143	3.279	2.793	2.768	2.785	2.747	.159
150- 165	158	3.373	2.342	2.356	2.509	2.515	.159
165- 180	173	2.222	2.204	2.175			
180- 195	188	2.282	2.093	2.483			
SUM :		33.324	32.125	32.194	27.139	27.087	19.337

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP10
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	2.364	2.462	2.359	2.186	2.323	2.435
15- 30	23	2.594	2.547	2.615	2.354	2.295	2.380
30- 45	38	2.122	2.039	2.134	1.882	1.835	1.936
45- 60	53	2.053	1.973	2.077	1.906	1.945	2.049
60- 75	68	1.197	1.231	1.234	1.266	1.164	1.119
75- 90	83	.734	.707	.807	.733	.820	.836
90- 105	98	.650	.643	.755	.703	.791	.848
105- 120	113	.779	.900	.951	.814	.931	1.048
120- 135	128	2.476	2.671	2.905	2.381	2.547	2.732
135- 150	143	3.417	3.412	3.311	3.356	3.416	3.402
150- 165	158	3.532	3.484	3.453	3.730	3.738	3.454
165- 180	173	3.347	3.428	3.330			
SUM :		25.263	25.498	25.930	21.312	21.806	22.240

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP11
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	8	1.703	1.703	1.779	1.439	1.763	1.719
15- 30	23	1.596	1.605	1.713	1.481	1.667	1.631
30- 45	38	1.355	1.354	1.465	1.364	1.494	1.375
45- 60	53	.896	.873	.993	.930	1.088	.956
60- 75	68	.743	.730	.911	.831	.976	.879
75- 90	83	.742	.730	.848	.772	.944	.822
90- 105	98	1.441	1.487	1.857	1.156	1.409	1.368
105- 120	113	2.620	2.575	2.616	2.669	2.634	2.558
120- 135	128	2.633	2.637	2.581	2.708	2.673	2.602
135- 150	143	2.421	2.465	2.471	2.426	2.495	2.421
150- 165	158	1.794	1.798	1.801	1.830	1.861	1.839
165- 180	173	1.579	1.903	1.809	1.913	1.899	1.873
180- 195	188	1.054					
195- 210	203	1.745					
210- 225	218	2.929					
SUM :		25.252	19.861	20.845	19.521	20.907	20.044

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP12
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	2.154	1.864	1.643	1.554	1.848	1.952
15- 30	23	2.908	2.771	2.497	2.644	2.874	2.848
30- 45	38	2.942	2.838	2.874	2.920	2.866	3.382
45- 60	53	2.915	2.977	2.914	2.989	3.108	3.074
60- 75	68	2.581	2.708	2.609	2.583	2.504	2.457
75- 90	83	2.528	2.463	2.376	2.354	2.520	2.694
90- 105	98	3.324	3.282	3.187	3.254	3.218	3.225
105- 120	113	3.381	3.345	3.378	3.466	3.463	3.397
120- 135	128	2.866	2.869	2.838	3.004	2.932	2.939
135- 150	143	2.708	2.721	2.931	2.779	2.716	2.774
150- 165	158	2.944	2.949	2.983	2.917	2.943	2.949
165- 180	173	2.456	2.471	2.551	3.037	3.021	2.959
180- 195	188	2.303	2.311	2.415			
SUM :		36.010	35.568	35.195	33.500	34.015	34.652

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP13
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	2.449	2.175	2.087	1.919	2.032	2.012
15- 30	23	2.742	2.515	2.328	2.298	2.298	2.286
30- 45	38	3.061	2.965	2.978	2.941	3.000	2.964
45- 60	53	3.345	3.061	3.059	3.016	3.051	2.959
60- 75	68	2.945	2.876	2.795	2.584	2.681	2.645
75- 90	83	2.591	2.720	2.743	2.579	2.628	2.652
90- 105	98	2.927	3.043	3.059	2.973	3.092	3.013
105- 120	113	3.404	3.352	3.321	3.371	3.446	3.375
120- 135	128	3.073	3.097	3.119	3.161	3.236	3.112
135- 150	143	2.204	2.203	2.346	2.265	2.326	2.177
150- 165	158	1.549	1.539	1.542	1.485	1.573	1.490
165- 180	173	1.455	1.406	1.451	1.307	1.355	1.390
180- 195	188	1.800	1.620	1.921			
SUM :		33.545	32.571	32.749	29.900	30.720	30.075

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP14
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	2.359	2.291	2.409	2.010	2.309	2.322
15- 30	23	2.605	2.584	2.536	2.499	2.501	2.436
30- 45	38	2.650	2.729	2.707	2.566	2.596	2.646
45- 60	53	2.682	2.658	2.673	2.465	2.626	2.567
60- 75	68	1.767	1.715	1.773	1.836	1.833	1.718
75- 90	83	1.787	1.869	1.858	1.690	1.743	1.807
90- 105	98	2.801	2.754	2.890	2.673	2.751	2.760
105- 120	113	3.128	3.139	3.171	3.173	3.254	3.094
120- 135	128	3.525	3.477	3.414	3.287	3.375	3.384
135- 150	143	3.346	3.369	3.348	3.420	3.399	3.336
150- 165	158	3.251	3.232	3.222	3.249	3.275	3.249
165- 180	173	3.221	3.273	3.227	3.425	3.582	3.413
180- 195	188	3.220	3.235	3.219			
SUM :		36.342	36.325	36.445	32.295	33.245	32.744

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP15
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
	DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	.873	.933	.960	.723	.934	1.019
15- 30	23	2.123	2.116	2.055	1.665	1.875	2.089
30- 45	38	2.413	2.425	2.451	2.434	2.469	2.495
45- 60	53	2.976	3.035	2.958	2.804	2.892	3.053
60- 75	68	3.182	3.212	3.193	3.178	3.220	3.258
75- 90	83	3.114	3.163	3.118	3.203	3.067	3.186
90- 105	98	3.201	3.225	3.234	3.175	3.210	3.221
105- 120	113	3.207	3.222	3.175	3.232	3.205	3.254
120- 135	128	3.257	3.249	3.232	3.339	3.280	3.352
135- 150	143	2.511	2.819	2.714	3.145	3.178	3.073
150- 165	158	2.084	2.066	2.211	2.074	1.997	2.282
165- 180	173	2.899	2.904	3.012	3.179	3.288	3.455
180- 195	188	2.243	2.420	2.701			
195- 210	203	2.871	3.011	3.157			
	SUM :	36.955	37.800	38.170	32.153	32.616	33.739

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP16
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	2.363	2.317	2.329	1.967	2.154	2.200
15- 30	23	2.222	2.212	2.237	2.176	2.188	2.186
30- 45	38	2.201	2.188	2.220	2.077	2.106	2.139
45- 60	53	2.922	2.905	2.940	2.850	2.943	2.982
60- 75	68	2.918	2.978	3.060	3.138	3.065	3.007
75- 90	83	3.082	3.014	3.041	2.979	3.088	2.944
90- 105	98	3.256	3.229	3.243	3.173	3.233	3.250
105- 120	113	3.313	3.270	3.283	3.398	3.317	3.303
120- 135	128	3.291	3.285	3.325	3.253	3.331	3.289
135- 150	143	3.381	3.399	3.392	3.421	3.469	3.411
150- 165	158	3.255	3.247	3.323	3.669	3.453	3.515
165- 180	173	3.164	3.147	3.338			
180- 195	188	3.136	3.122	3.177			
SUM :		38.504	38.312	38.907	32.102	32.349	32.227

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP17
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE : 5/14/85 5/25/85 6/13/85 7/26/85 8/7/85 9/26/85

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
0- 15	8	1.554	1.510	1.591	1.161	1.470	1.486
15- 30	23	2.374	2.408	2.454	2.301	2.474	2.415
30- 45	38	2.717	2.609	2.639	2.691	2.795	2.688
45- 60	53	2.598	2.479	2.453	2.265	2.442	2.394
60- 75	68	2.900	2.975	2.919	2.969	3.000	2.983
75- 90	83	3.114	3.061	3.035	3.034	3.041	3.071
90- 105	98	3.086	3.064	3.057	3.010	3.060	3.102
105- 120	113	3.186	3.177	3.199	3.068	3.252	3.124
120- 135	128	3.407	3.386	3.398	3.309	3.356	3.374
135- 150	143	3.413	3.444	3.397	3.436	3.459	3.305
150- 165	158	3.331	3.452	3.401	3.462	3.461	3.523
165- 180	173	2.866	2.822	2.888	3.327	3.392	3.393
180- 195	188	3.421	3.329	3.282			
SUM :		37.965	37.718	37.714	33.875	35.045	34.699

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP18
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	1.187	1.107	1.027	.860	.881	.960
15- 30	23	2.342	1.979	1.868	1.856	1.790	1.983
30- 45	38	2.977	2.881	2.866	2.893	2.873	2.773
45- 60	53	2.766	2.804	2.745	2.818	2.791	2.778
60- 75	68	3.121	3.183	3.128	3.212	3.146	3.145
75- 90	83	2.840	2.936	2.999	3.089	3.057	2.948
90- 105	98	2.185	2.446	2.473	2.702	2.713	2.586
105- 120	113	1.484	3.160	1.951	1.885	1.781	2.473
120- 135	128	1.662	3.367	2.321	2.447	2.420	2.438
135- 150	143	.950	3.426	3.380	1.559	1.560	1.452
150- 165	158	.826	3.434	3.384	.981	.896	
165- 180	173	.914	2.807	2.874	.801	.778	
180- 195	188	1.549	3.310	3.266	1.035	1.086	
SUM :		24.805	36.840	34.208	26.141	25.774	23.539

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP19
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
	DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	1.779	1.781	1.710	1.575	1.800	1.872
15- 30	23	2.841	2.871	2.802	2.822	2.805	2.916
30- 45	38	2.422	2.435	2.379	2.321	2.389	2.401
45- 60	53	2.824	2.779	2.803	3.192	2.678	2.693
60- 75	68	3.121	3.232	3.177	3.027	3.158	3.125
75- 90	83	3.286	3.330	3.345	3.347	3.236	3.267
90- 105	98	3.328	3.351	3.318	3.286	3.330	3.279
105- 120	113	3.343	3.344	3.310	3.310	3.295	3.362
120- 135	128	2.988	2.757	2.953	2.996	3.083	3.000
135- 150	143	1.747	1.649	1.743	1.616	1.614	1.610
150- 165	158	3.038	2.994	3.087	2.849	2.912	2.968
165- 180	173	2.882	2.947	2.974	2.985	2.999	2.879
180- 195	188	3.793	4.044	3.819	2.763	2.675	2.545
	SUM :	37.390	37.515	37.420	36.089	35.975	35.918

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP20
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	2.223	2.132	2.039	2.008	2.187	2.189
15- 30	23	2.589	2.493	2.474	2.595	2.640	2.560
30- 45	38	2.980	2.952	2.900	2.992	2.959	3.001
45- 60	53	3.229	3.258	3.155	3.164	3.190	3.114
60- 75	68	3.325	3.179	3.224	3.317	3.253	3.227
75- 90	83	3.340	2.956	3.204	3.273	3.200	3.094
90- 105	98	2.972	2.819	2.996	3.094	2.964	2.918
105- 120	113	2.809	2.982	2.936	2.931	2.858	2.861
120- 135	128	2.985	2.841	3.053	3.171	3.136	2.992
135- 150	143	2.856	3.027	2.911	2.799	2.844	2.772
150- 165	158	2.999	3.110	3.171	3.158	3.160	2.980
165- 180	173	2.999	3.226	3.544	2.552	2.434	2.381
SUM :		35.304	34.975	35.607	35.054	34.827	34.090

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP21
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE : 5/14/85 5/25/85 6/13/85 7/26/85 8/7/85 9/26/85

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
0- 15	8	2.235	1.808	1.755	2.170	2.358	2.339
15- 30	23	2.464	2.440	2.412	2.270	2.242	2.244
30- 45	38	2.686	2.560	2.561	2.653	2.661	2.682
45- 60	53	2.994	2.927	2.928	3.170	3.153	3.150
60- 75	68	3.419	3.351	3.302	3.442	3.392	3.367
75- 90	83	3.690	3.624	3.645	3.725	3.629	3.612
90- 105	98	3.584	3.646	3.612	3.650	3.667	3.620
105- 120	113		3.518	3.496	3.455	3.462	3.329
120- 135	128		2.839	2.941	2.441	2.248	2.135
135- 150	143		1.987	2.050	1.577	1.506	1.486
150- 165	158		2.564	2.908	2.151	2.238	2.289
165- 180	173				2.993		
SUM :		21.070	31.300	31.449	33.697	30.559	30.255

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP21A
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	2.470	2.426	2.515	1.613	2.216	2.429
15- 30	23	2.949	2.993	3.170	2.599	3.155	3.195
30- 45	38	2.784	2.799	3.048	2.514	3.182	3.238
45- 60	53	2.630	2.749	3.131	2.541	3.042	3.117
60- 75	68	2.874	2.985	3.283	2.830	3.192	3.228
75- 90	83	3.029	3.118	3.349	3.065	3.385	3.404
90- 105	98	3.288	3.282	3.413	3.364	3.393	3.428
105- 120	113	3.400	3.317	3.338			
SUM :		23.423	23.668	25.247	18.530	21.569	22.042

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP22
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	1.830	1.762	1.740	1.474	1.583	1.725
15- 30	23	2.163	2.150	2.181	1.998	2.045	2.178
30- 45	38	2.653	2.570	2.628	2.286	2.320	2.471
45- 60	53	3.297	3.300	3.252	3.163	3.200	3.223
60- 75	68	3.108	3.093	3.054	3.191	3.139	3.088
75- 90	83	2.813	2.766	2.786	2.729	2.759	2.753
90- 105	98	3.116	3.046	3.084	3.009	3.003	3.051
105- 120	113	3.096	3.104	2.959	3.179	3.195	3.212
120- 135	128	2.901	2.872	2.904	2.801	2.724	2.732
135- 150	143	3.310	3.216	3.247	3.242	3.207	3.180
150- 165	158	2.983	2.955	2.923	3.296	3.233	3.064
165- 180	173	3.027	2.797	2.549	2.411	2.345	2.359
180- 195	188	3.251		2.689			
SUM :		37.549	33.631	34.955	32.780	32.753	33.037

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP23
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	8	2.664	2.716	2.706	1.746	1.783	2.038
15- 30	23	2.475	2.613	2.402	2.880	2.842	2.851
30- 45	38	2.726	2.571	2.613	2.401	2.424	2.408
45- 60	53	2.944	2.780	2.933	3.077	3.110	3.068
60- 75	68	2.549	2.553	2.521	2.490	2.409	2.342
75- 90	83	3.211	3.219	3.179	3.075	3.148	3.131
90- 105	98	3.286	3.317	3.251	3.216	3.256	3.311
105- 120	113	2.480	2.317	2.318	3.112	3.040	2.873
120- 135	128	3.132	3.174	3.130	2.498	2.490	2.616
135- 150	143	3.267	3.303	3.219	3.286	3.275	3.280
150- 165	158	3.306	3.264	3.204	3.289	3.270	3.288
165- 180	173	2.687	2.442	2.370	3.195	3.248	3.155
180- 195	188		2.117	2.169			
SUM :		34.985	36.485	36.016	34.265	34.297	34.362

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP24
PROJECT NAME: SILVER BOW CREEK TAILINGS

DATE : 5/14/85 5/25/85 6/13/85 7/26/85 8/7/85 9/26/85

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT (INCHES)					
0- 15	8	1.879	1.885	1.744	1.188	1.528	1.704
15- 30	23	2.625	2.607	2.581	2.839	2.775	2.613
30- 45	38	2.687	2.609	2.654	2.451	2.624	2.742
45- 60	53	3.473	3.397	3.372	3.458	3.360	3.430
60- 75	68	3.305	3.203	3.278	3.429	3.355	3.366
75- 90	83	2.817	2.736	2.782	3.202	3.017	2.919
90- 105	98	1.569	1.512	1.470	1.806	1.776	1.603
105- 120	113	1.462	1.463	1.404	1.541	1.553	1.557
120- 135	128	.961	.929	.946	1.052	1.015	.991
135- 150	143	.981	.988	.975	1.001	1.007	1.003
150- 165	158	.903	.879	.897	.951	.908	.901
165- 180	173	.928	.913	.907	.938	.881	.914
180- 195	188	1.253	1.122	1.162	1.001	.967	.983
195- 210	203	2.249	1.894	2.286	1.206	1.296	1.293
SUM :		27.091	26.137	26.459	26.062	26.062	26.022

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP01
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
DATE :		5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	7.5		-.050	-.007	-.173	.090	.073
15- 30	22.5		-.073	.024	-.066	.114	-.080
30- 45	38		-.034	-.016	-.107	.145	-.124
45- 60	53		-.044	-.038	.240	-.054	-.011
60- 75	68		.118	-.098	-.169	.076	-.004
75- 90	83		.027	-.009	.159	.021	-.128
90- 105	98		.062	-.038	-.122	-.024	.012
105- 120	113		.034	-.039	.108	-.040	.002
120- 135	128		.024	.014	.103	-.083	.034
135- 150	143		.006	-.022	.159	.005	-.075
150- 165	158		-.043	-.075	-.208	-.074	.071
165- 180	173		-.114	.056	.401	-.104	-.035
180- 195	188		.016	.132	-.120	-.008	-.145
SUM :			-.070	-.116	.202	.064	-.410

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP02
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)			
DATE :		5/14/85 5/25/85	5/25/85 6/12/85	6/12/85 7/26/85	7/26/85 8/7/85	8/7/85 9/26/85
0- 15	7.5	.039	-.185	.140	.041
15- 30	22.5	.004	-.055	.045	.064
30- 45	38	.002	-.056	.026	.013
45- 60	53	.071	-.067	.051	.016
60- 75	68	.029	-.033	.059	-.043
75- 90	83	.033	.053	.000	.008
90- 105	98	-.035	-.191	.125	-.050
105- 120	113	-.003	.385	-.108	.031
120- 135	128	-.030	.108	-.062	-.033
135- 150	143	.007	-.572	.076	-.003
150- 165	158	.168	-.324	.116	.025
165- 180	173	.388	.005	.156	-.049
180- 195	188	.008	.012	-.011	-.067
SUM :		.681	-.920	.612	-.046

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP03
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)			
DATE :		5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	7.5		-.076	.114	-.029	-.048
15- 30	22.5		.071	-.078	-.054	.162
30- 45	38		.023	-.171	.059	.041
45- 60	53		.047	.267	-.079	-.083
60- 75	68		.069	-.391	.132	.076
75- 90	83		.043	.061	-.106	.056
90- 105	98		.018	.064	-.001	.145
105- 120	113		1.869	.130	-.021	-.025
120- 135	128		2.264	-.188	.048	-.023
135- 150	143		1.126	1.213	.075	-.165
150- 165	158		.686	-1.007	.136	-.002
165- 180	173		.067	-.002	.127	.002
180- 195	188		.143	-.128	.016	-.020
SUM :			6.352	-.117	.303	.116

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP04
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
	DATE :	5/14/85	5/25/85	6/12/85	7/26/85	8/7/85
0- 15	7.5	-.143	.330	-.846	.355	.613
15- 30	22.5	.033	.319	-.463	-.039	.140
30- 45	38	-.011	.048	-.144	-.043	.052
45- 60	53	-.045	-.038	.013	-.071	.066
60- 75	68	.026	-.080	-.092	.030	.056
75- 90	83	.029	-.195	-.174	.000	-.030
90- 105	98	.072	-.063	-.293	-.108	.105
105- 120	113	-.030	-.117	-.026	.026	-.006
120- 135	128	.002	-.107	.211	-.028	-.016
135- 150	143	-.029	.031	.038	-.063	.042
150- 165	158	-.070	-.006	-.002	.131	-.289
165- 180	173	-.058	-.119	.281	.274	.065
	SUM :	-.223	.002	-1.496	.463	.800

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP05
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
	DATE :	5/14/85 5/25/85	5/25/85 6/12/85	6/12/85 7/26/85	7/26/85 8/7/85	8/7/85 9/26/85
0- 15	7.5	-.020	.008	-.214	.053	.066
15- 30	22.5	-.086	.014	-.367	.004	.516
30- 45	38	.046	.179	-.263	.179	-2.482
45- 60	53	-2.019		2.828	.075	-3.003
60- 75	68	-2.875				
75- 90	83	-3.037				
90- 105	98	-3.033				
	SUM :	-11.025	.201	1.980	.312	-4.903

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP06
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
DATE :		5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	7.5		1.301	-.014	-.892	.266	.510
15- 30	22.5		.416	.117	-.284	.305	.023
30- 45	38		.402	.036	-.369	-.163	.123
SUM :			2.119	.139	-1.545	.408	.656

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP07
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
	DATE :	5/14/85 5/25/85	5/25/85 6/12/85	6/12/85 7/26/85	7/26/85 8/7/85	8/7/85 9/26/85
0- 15	7.5	-.422	.540	-.859	.284	.688
15- 30	22.5	.022	.132	-.272	-.069	.068
30- 45	38	.103	.047	-.190	.012	.034
45- 60	53	.035	.025	-.042	-.003	-.026
60- 75	68	.268	-.043	-.014	-.046	-.011
75- 90	83	-.105	.020	-.020	-.084	.095
90- 105	98	.459	.028	.012	-.037	.018
105- 120	113	.143	.011	-.035	-.053	.043
120- 135	128	.049	-.015	.057	-.166	.025
135- 150	143	.049	-.010	-.013	-.074	.029
150- 165	158	.044	.026	.130	-.026	.012
165- 180	173	-.003	-.017			
180- 195	188	-.176	.409			
	SUM :	.466	1.152	-1.246	-.261	.974

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP08
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
DATE :		5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	7.5		.090	.136	-.204	.072	.186
15- 30	22.5		.016	.109	-.167	-.006	.091
30- 45	38		.036	.035	-.137	.019	.081
45- 60	53		-.003	.025	-.075	-.030	.030
60- 75	68		-.137	.139	-.150	.068	.151
75- 90	83		.210	.567	-.870	.124	
SUM :			.211	1.012	-2.406	.308	.539

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP09
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
	DATE :	5/14/85 5/25/85	5/25/85 6/13/85	6/13/85 7/26/85	7/26/85 8/7/85	8/7/85 9/26/85
0- 15	7.5	.519	-.502	-.162	.170	.101
15- 30	22.5	.092	-.016	-.106	.098	.088
30- 45	38	-.083	.064	.071	-.098	.004
45- 60	53	-.019	.185	-.377	.053	.181
60- 75	68	.003	.030	.057	-.033	.009
75- 90	83	-.014	-.086	.001	.109	-.034
90- 105	98	.006	.003	.113	-.079	.009
105- 120	113	.005	.001	.207	-.115	-.027
120- 135	128	.017	.040	-.374	-.128	
135- 150	143	-.486	-.025	.016	-.038	
150- 165	158	-1.031	.013	.154	.006	
165- 180	173	-.019	-.029			
180- 195	188	-.190	.390			
	SUM :	-1.199	.069	-.399	-.053	.331

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP10
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
	DATE :	5/14/85 5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	7.5	.099	-.104	-.173	.137	.113
15- 30	22.5	-.048	.068	-.260	-.060	.085
30- 45	38	-.082	.095	-.252	-.047	.101
45- 60	53	-.080	.104	-.172	.039	.104
60- 75	68	.034	.003	.032	-.102	-.045
75- 90	83	-.027	.100	-.074	.087	.016
90- 105	98	-.006	.112	-.052	.088	.057
105- 120	113	.121	.051	-.137	.117	.117
120- 135	128	.195	.235	-.524	.166	.185
135- 150	143	-.005	-.101	.045	.060	-.014
150- 165	158	-.047	-.031	.277	.008	-.284
165- 180	173	.081	-.099			
	SUM :	.235	.433	-1.292	.493	.434

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP11
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
	DATE :	5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
0- 15	7.5		.000	.075	-.340	.324	-.044
15- 30	22.5		.009	.107	-.232	.187	-.037
30- 45	38		-.001	.112	-.101	.130	-.119
45- 60	53		-.024	.120	-.062	.158	-.131
60- 75	68		-.013	.181	-.081	.146	-.098
75- 90	83		-.012	.118	-.076	.172	-.121
90- 105	98		.047	.370	-.701	.253	-.041
105- 120	113		-.045	.042	.052	-.034	-.076
120- 135	128		.004	-.056	.128	-.035	-.071
135- 150	143		.044	.006	-.045	.070	-.074
150- 165	158		.004	.003	.029	.031	-.023
165- 180	173		.324	-.093	.104	-.014	-.026
	SUM :		.399	.984	-1.327	1.386	-.862

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP12
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	7.5		-.290	-.221	-.089	.293	.104
15- 30	22.5		-.137	-.274	.146	.230	-.026
30- 45	38		-.104	.036	.045	-.053	.516
45- 60	53		.062	-.063	.075	.119	-.034
60- 75	68		.126	-.099	-.026	-.079	-.047
75- 90	83		-.065	-.087	-.021	.166	.174
90- 105	98		-.042	-.094	.066	-.035	.007
105- 120	113		-.036	.033	.088	-.002	-.066
120- 135	128		.003	-.031	.165	-.072	.007
135- 150	143		.013	.210	-.152	-.063	.059
150- 165	158		.005	.033	-.066	.026	.006
165- 180	173		.014	.080	.486	-.015	-.062
180- 195	188		.008	.104			
SUM :			-.442	-.373	.717	.514	.638

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP13
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
	DATE :	5/14/85 5/25/85	5/25/85 6/13/85	6/13/85 7/26/85	7/26/85 8/7/85	8/7/85 9/26/85
0- 15	7.5	-.275	-.088	-.168	.113	-.020
15- 30	22.5	-.227	-.187	-.030	.001	-.013
30- 45	38	-.096	.014	-.038	.059	-.036
45- 60	53	-.284	-.002	-.043	.035	-.092
60- 75	68	-.069	-.081	-.211	.097	-.036
75- 90	83	.129	.023	-.164	.049	.024
90- 105	98	.116	.016	-.086	.120	-.079
105- 120	113	-.052	-.031	.050	.075	-.070
120- 135	128	.025	.022	.042	.074	-.124
135- 150	143	-.001	.143	-.081	.061	-.150
150- 165	158	-.010	.003	-.057	.088	-.083
165- 180	173	-.049	.045	-.143	.047	.035
180- 195	188	-.180	.301			
	SUM :	-.974	.178	-.930	.819	-.645

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP14
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
	DATE :	5/14/85 5/25/85	5/25/85 6/13/85	6/13/85 7/26/85	7/26/85 8/7/85	8/7/85 9/26/85
0- 15	7.5	-.068	.118	-.399	.299	.013
15- 30	22.5	-.022	-.047	-.037	.002	-.065
30- 45	38	.079	-.022	-.141	.030	.050
45- 60	53	-.024	.015	-.208	.161	-.059
60- 75	68	-.052	.057	.063	-.003	-.115
75- 90	83	.082	-.011	-.168	.054	.064
90- 105	98	-.047	.136	-.216	.077	.009
105- 120	113	.011	.032	.003	.080	-.159
120- 135	128	-.048	-.063	-.127	.088	.009
135- 150	143	.024	-.021	.072	-.021	-.063
150- 165	158	-.019	-.010	.027	.026	-.026
165- 180	173	.052	-.046	.198	.157	-.169
180- 195	188	.015	-.016			
	SUM :	-.016	.120	-.933	.950	-.511

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP15
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	7.5		.060	.027	-.237	.211	.086
15- 30	22.5		-.007	-.061	-.390	.210	.214
30- 45	38		.012	.026	-.017	.036	.026
45- 60	53		.060	-.078	-.154	.088	.161
60- 75	68		.029	-.019	-.015	.042	.037
75- 90	83		.049	-.045	.085	-.137	.119
90- 105	98		.024	.009	-.059	.035	.012
105- 120	113		.016	-.047	.057	-.028	.050
120- 135	128		-.009	-.017	.108	-.059	.072
135- 150	143		.308	-.105	.432	.033	-.106
150- 165	158		-.017	.145	-.138	-.077	.285
165- 180	173		.005	.107	.167	.109	.167
180- 195	188		.176	.282			
195- 210	203		.140	.146			
SUM :			.845	.371	.160	.463	1.123

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP16
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
	DATE :	5/14/85 5/25/85	5/25/85 6/13/85	6/13/85 7/26/85	7/26/85 8/7/85	8/7/85 9/26/85
0- 15	7.5	-.046	.012	-.362	.187	.045
15- 30	22.5	-.010	.025	-.061	.012	-.002
30- 45	38	-.012	.032	-.144	.030	.032
45- 60	53	-.017	.035	-.090	.093	.039
60- 75	68	.060	.082	.078	-.073	-.058
75- 90	83	-.068	.027	-.061	.109	-.145
90- 105	98	-.027	.015	-.070	.060	.018
105- 120	113	-.042	.013	.115	-.081	-.014
120- 135	128	-.007	.040	-.072	.079	-.042
135- 150	143	.017	-.007	.029	.048	-.058
150- 165	158	-.008	.076	.346	-.216	.062
165- 180	173	-.018	.191			
180- 195	188	-.014	.055			
	SUM :	-.192	.595	-.294	.247	-.123

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP17
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
	DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	7.5		-.043	.081	-.431	.309	.016
15- 30	22.5		.034	.046	-.154	.174	-.059
30- 45	38		-.107	.029	.053	.103	-.107
45- 60	53		-.119	-.026	-.188	.177	-.048
60- 75	68		.076	-.056	.050	.031	-.018
75- 90	83		-.053	-.026	-.002	.007	.031
90- 105	98		-.022	-.008	-.046	.050	.042
105- 120	113		-.009	.022	-.131	.184	-.128
120- 135	128		-.021	.013	-.090	.047	.018
135- 150	143		.031	-.048	.039	.023	-.154
150- 165	158		.122	-.052	.061	-.001	.062
165- 180	173		-.043	.066	.439	.065	.000
180- 195	188		-.093	-.046			
	SUM :		-.247	-.004	-.399	1.169	-.346

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP18
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	7.5		-.080	-.080	-.167	.021	.078
15- 30	22.5		-.363	-.111	-.012	-.065	.192
30- 45	38		-.096	-.015	.028	-.020	-.100
45- 60	53		.037	-.058	.073	-.028	-.012
60- 75	68		.062	-.055	.084	-.066	-.001
75- 90	83		.096	.062	.091	-.033	-.109
90- 105	98		.260	.027	.229	.011	-.127
SUM :			-.082	-.231	.325	-.128	-.078

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP19
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
	DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	7.5		.002	-.070	-.135	.225	.072
15- 30	22.5		.030	-.069	.020	-.017	.111
30- 45	38		.014	-.056	-.058	.068	.012
45- 60	53		-.045	.024	.389	-.514	.015
60- 75	68		.111	-.055	-.150	.131	-.033
75- 90	83		.044	.015	.002	-.111	.031
90- 105	98		.024	-.034	-.032	.044	-.051
105- 120	113		.001	-.034	.000	-.015	.067
120- 135	128		-.231	.196	.043	.087	-.084
135- 150	143		-.098	.093	-.127	-.002	-.004
150- 165	158		-.043	.093	-.239	.064	.055
165- 180	173		.066	.027	.011	.014	-.120
180- 195	188		.251	-.225	-1.056	-.088	-.130
	SUM :		.125	-.095	-1.332	-.114	-.058

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP20
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
	DATE :	5/14/85 5/25/85	5/25/85 6/13/85	6/13/85 7/26/85	7/26/85 8/7/85	8/7/85 9/26/85
0- 15	7.5	-.091	-.093	-.031	.179	.002
15- 30	22.5	-.096	-.020	.122	.045	-.080
30- 45	38	-.028	-.052	.091	-.033	.042
45- 60	53	.029	-.103	.008	.026	-.076
60- 75	68	-.146	.046	.092	-.064	-.026
75- 90	83	-.384	.247	.070	-.073	-.106
90- 105	98	-.152	.176	.098	-.130	-.046
105- 120	113	.173	-.046	-.005	-.073	.004
120- 135	128	-.144	.212	.118	-.035	-.144
135- 150	143	.171	-.116	-.112	.046	-.073
150- 165	158	.111	.061	-.013	.003	-.181
165- 180	173	.226	.319	-.993	-.117	-.053
	SUM :	-.330	.632	-.556	-.227	-.737

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP21
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
	DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	7.5		-.426	-.053	.415	.188	-.020
15- 30	22.5		-.024	-.028	-.141	-.028	.002
30- 45	38		-.126	.001	.091	.009	.020
45- 60	53		-.067	.001	.242	-.017	-.003
60- 75	68		-.067	-.049	.141	-.050	-.026
75- 90	83		-.067	.021	.080	-.096	-.017
90- 105	98		.062	-.033	.037	.018	-.047
105- 120	113		3.258	-.022	-.041	.007	-.133
120- 135	128		2.579	.102	-.500	-.192	-.114
135- 150	143		1.727	.063	-.473	-.071	-.019
150- 165	158		2.304	.344	-.757	.087	.051
	SUM :		9.153	.345	-.907	-.146	-.304

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP21A
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
DATE :		5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	7.5		-.044	.089	-.901	.602	.213
15- 30	22.5		.043	.178	-.571	.557	.039
30- 45	38		.015	.249	-.533	.668	.056
45- 60	53		.119	.382	-.590	.501	.075
60- 75	68		.111	.298	-.453	.361	.037
75- 90	83		.088	.231	-.284	.320	.019
90- 105	98		-.006	.131	-.050	.030	.034
105- 120	113		-.083	.021			
SUM :			.245	1.579	-3.386	3.040	.472

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP22
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
	DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
0- 15	7.5		-.067	-.023	-.266	.109	.142
15- 30	22.5		-.013	.031	-.184	.048	.132
30- 45	38		-.083	.058	-.342	.034	.151
45- 60	53		.003	-.048	-.089	.037	.023
60- 75	68		-.015	-.039	.137	-.053	-.051
75- 90	83		-.047	.020	-.057	.030	-.005
90- 105	98		-.071	.038	-.075	-.006	.048
105- 120	113		.008	-.145	.221	.016	.017
120- 135	128		-.029	.031	-.103	-.076	.007
135- 150	143		-.094	.031	-.006	-.035	-.026
150- 165	158		-.028	-.032	.373	-.062	-.169
165- 180	173		-.231	-.247	-.138	-.066	.014
	SUM :		-.666	-.326	-.529	-.026	.284

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP23
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
	DATE :	5/14/85 5/25/85	5/25/85 6/13/85	6/13/85 7/26/85	7/26/85 8/7/85	8/7/85 9/26/85
0- 15	7.5	.052	-.010	-.960	.037	.255
15- 30	22.5	.138	-.211	.478	-.038	.009
30- 45	38	-.155	.042	-.212	.023	-.016
45- 60	53	-.163	.152	.144	.033	-.041
60- 75	68	.004	-.031	-.032	-.081	-.067
75- 90	83	.008	-.040	-.104	.074	-.018
90- 105	98	.030	-.065	-.035	.041	.055
105- 120	113	-.162	.001	.794	-.071	-.168
120- 135	128	.042	-.044	-.632	-.008	.126
135- 150	143	.035	-.083	.067	-.011	.005
150- 165	158	-.042	-.060	.085	-.020	.018
165- 180	173	-.246	-.071	.824	.053	-.093
180- 195	188	1.857	.052			
	SUM :	-.457	-.369	.416	.031	.065

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP24
PROJECT NAME: SILVER BOW CREEK TAILINGS

DEPTH (cm)	MEAN DEPTH	VOLUMETRIC WATER CONTENT CHANGE BETWEEN DATES (INCHES)				
DATE :		5/14/85 C	5/25/85	6/13/85	7/26/85	8/7/85 9/26/85
0- 15	7.5		.006	-.141	-.556	.340 .176
15- 30	22.5		-.019	-.025	.258	-.064 -.162
30- 45	38		-.077	.044	-.203	.173 .118
45- 60	53		-.076	-.025	.086	-.098 .070
60- 75	68		-.101	.075	.151	-.073 .011
75- 90	83		-.081	.046	.420	-.185 -.099
90- 105	98		-.058	-.041	.336	-.030 -.173
105- 120	113		.002	-.059	.137	.012 .004
120- 135	128		-.033	.017	.106	-.037 -.024
135- 150	143		.007	-.013	.026	.005 -.003
150- 165	158		-.024	.018	.054	-.043 -.006
165- 180	173		-.014	-.006	.031	-.057 .033
180- 195	188		-.131	.040	-.162	-.034 .016
195- 210	203		-.355	.392		.090 -.003
SUM :			-.954	.322	.684	-.001 -.040

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP01
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
TIME :	1912	1430	1643	1218	1827	1639
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6863	6782	6740	3407	3360	3544
2 :	6710	6768	6922	3427	3376	3526
3 :	6809	6741	6923	3403	3403	3537
4 :				3430	3495	
5 :				3410	3430	
# OF COUNTS :	3	3	3	5	5	3
MEAN :	6794	6764	6862	3415	3413	3536

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	6975	6724	6789	2515	2668	2895
15- 30	23	8049	7694	7911	3136	3330	3307
30- 45	38	9168	8978	9036	3503	3752	3664
45- 60	53	8233	8004	7952	3682	3586	3695
60- 75	68	9857	10329	10043	3787	3916	4050
75- 90	83	10873	10943	11062	4751	4784	4727
90- 105	98	12553	12769	12785	4935	4890	5088
105- 120	113	12705	12799	12812	5344	5271	5465
120- 135	128	13699	13742	14005	5800	5652	5917
135- 150	143	12351	12324	12406	5274	5278	5334
150- 165	158	13673	13425	13284	4981	4850	5152
165- 180	173	12910	12354	12781	5840	5655	5795
180- 195	188	11760	11777	12537	4842	4824	4737

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP02
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	7/26/85	8/7/85	9/26/85	
TIME :	1855	1442	1212	1835	1646	
USER :	WMS	WMS	WMS	WMS	WMS	
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	
CALIBRATION :						
A :	.044	.044	.027	.027	.027	
B :	.261	.261	.334	.334	.334	
SHIELD COUNTS :						
1 :	6798	6758	3429	3432	3502	
2 :	6788	6794	3428	3406	3480	
3 :	6829	6794	3447	3514	3601	
4 :	6782		3407	3419		
5 :			3410	3352		
# OF COUNTS :	4	3	5	5	3	
MEAN :	6799	6782	3424	3425	3528	ERROR

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)				
0- 15	8	1677	1845	581	824	923
15- 30	23	1962	1976	858	937	1080
30- 45	38	2542	2544	1081	1126	1183
45- 60	53	3300	3604	1480	1568	1644
60- 75	68	3987	4106	1737	1839	1817
75- 90	83	3758	3893	1803	1804	1873
90- 105	98	5368	5200	1895	2112	2086
105- 120	113	4448	4422	2588	2401	2529
120- 135	128	4003	3859	1885	1777	1771
135- 150	143	7289	7303	2062	2194	2255
150- 165	158	9400	10116	3603	3804	3963
165- 180	173	10675	12354	5057	5328	5400
180- 195	188	11773	11777	4842	4824	4850

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP03
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
TIME :	1420	1630	1205	1821	1615
USER :	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01
CALIBRATION :					
A :	.044	.044	.027	.027	.027
B :	.261	.261	.334	.334	.334
SHIELD COUNTS :					
1 :	6826	6914	3400	3454	3415
2 :	6798	6801	3403	3422	3440
3 :	6813	6931	3470	3367	3335
4 :			3476	3376	3544
5 :			3429	3400	3503
# OF COUNTS :	3	3	5	5	5
MEAN :	6812	6882	3436	3404	3447

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)				
0- 15	8	11715	11495	4857	4762	4739
15- 30	23	10645	11073	4358	4225	4562
30- 45	38	9208	9407	3546	3615	3733
45- 60	53	9394	9702	4425	4248	4157
60- 75	68	11246	11669	4046	4237	4424
75- 90	83	12089	12405	5121	4890	5050
90- 105	98	12356	12563	5188	5139	5458
105- 120	113	4422	12812	5400	5314	5339
120- 135	128	3859	14005	5311	5344	5372
135- 150	143	7303	12406	7128	7192	6996
150- 165	158	10116	13284	3603	3804	3850
165- 180	173	12354	12781	5157	5328	5400
180- 195	188	11777	12537	4842	4824	4850

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP04
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
TIME :	1925	1408	1618	1157	1814	1632
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6791	6755	6981	3517	3434	3444
2 :	6679	6717	7106	3278	3542	3566
3 :	6889	6896	7022	3480	3422	3395
4 :			7018	3523	3424	
5 :				3407	3407	
# OF COUNTS :	3	3	4	5	5	3
MEAN :	6786	6789	7032	3441	3446	3468

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	10269	9644	11496	3096	3720	4823
15- 30	23	9816	9967	11776	3871	3808	4079
30- 45	38	9821	9776	10345	3880	3810	3926
45- 60	53	8993	8797	8939	3616	3497	3636
60- 75	68	9257	9377	9345	3589	3646	3769
75- 90	83	11523	11658	11184	4149	4154	4129
90- 105	98	13325	13650	13850	4961	4779	4995
105- 120	113	14403	14277	14254	5581	5635	5662
120- 135	128	14882	14897	14940	6256	6216	6229
135- 150	143	15071	14948	15621	6214	6112	6226
150- 165	158	16342	16040	16584	6514	6752	6288
165- 180	173	16569	16322	16360	6921	7409	7572

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP05
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
TIME :	1731	1511	1551	1241	1853	1700
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6550	6914	6800	3479	3352	3476
2 :	6616	6864	6771	3553	3389	3506
3 :	6732	6905	6770	3487	3402	3629
4 :	6868			3535	3539	
5 :	6692				3490	
# OF COUNTS :	5	3	3	4	5	3
MEAN :	6692	6894	6780	3514	3434	3537

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	2949	2947	2932	985	1055	1204
15- 30	23	7065	6895	6843	2296	2252	3245
30- 45	38	9724	10223	10842	4101	4321	
45- 60	53	8765			5216	5229	
60- 75	68	12481					
75- 90	83	13184					
90- 105	98	13169					

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP06
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
TIME :	1749	1520	1545	1245	1903	1709
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6550	6802	6796	3535	3457	3559
2 :	6616	6810	6770	3471	3566	3578
3 :	6732	6828	6883	3365	3511	3538
4 :	6868			3470	3441	
5 :	6692			3406	3507	
# OF COUNTS :	5	3	3	5	5	3
MEAN :	6692	6813	6816	3449	3496	3558

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	2949	8754	8698	2055	2555	3521
15- 30	23	7065	9031	9551	3456	4044	4158
30- 45	38	9724	11679	11844	4214	3982	4275
45- 60	53	8765			4625	4684	4907
60- 75	68	12481			5295	5560	5768
75- 90	83	13184			7193	7359	
90- 105	98	13169					

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP07
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
TIME :	1828	1529	1528	1250	1910	1713
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6787	6772	6778	3406	3490	3645
2 :	6809	6701	6670	3436	3519	3411
3 :	6720	6763	6772	3413	3476	3458
4 :	6890		6782	3424	3476	
5 :			6837	3368	3418	
# OF COUNTS :	4	3	5	5	5	3
MEAN :	6802	6745	6768	3409	3476	3505

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	7318	5412	7803	1760	2295	3536
15- 30	23	10061	10076	10689	3912	3867	4020
30- 45	38	9437	9808	10046	3799	3895	3987
45- 60	53	8406	8489	8629	3498	3561	3545
60- 75	68	8459	9562	9405	3851	3845	3857
75- 90	83	8931	8396	8512	3490	3410	3607
90- 105	98	8387	10326	10482	4321	4340	4408
105- 120	113	10837	11373	11457	4623	4620	4735
120- 135	128	11550	11669	11640	4855	4657	4740
135- 150	143	11112	11234	11227	4571	4530	4619
150- 165	158	9118	9235	9381	4092	4125	4180
165- 180	173	8705	8620	8572			
180- 195	188	8971	8128	9951			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP08
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
TIME :	1810	1504	1558	1235	1858	1705
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6894	6782	6833	3188	3451	3512
2 :	6845	6804	6932	3286	3457	3531
3 :	7038	6822	6907	3318	3407	3628
4 :				3520	3499	
5 :				3479	3499	
# OF COUNTS :	3	3	3	5	5	3
MEAN :	6926	6803	6891	3358	3463	3557

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	3115	3457	4111	1389	1558	1935
15- 30	23	2454	2480	3001	1030	1052	1244
30- 45	38	2485	2599	2791	1001	1066	1242
45- 60	53	2772	2711	2856	1131	1114	1198
60- 75	68	4208	3528	4197	1514	1681	2000
75- 90	83	7020	7820	10454	2671	2972	
90- 105	98	10282			4699	4950	

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP09
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
TIME :	1006	1052	920	1016	1628	1913
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6654	6783	6949	3418	3407	3513
2 :	6897	6966	6903	3419	3518	3521
3 :	6985	6756	7022	3390	3470	3497
4 :	6957		6782	3467	3429	
5 :	6692		6837	3479	3443	
# OF COUNTS :	5	3	5	5	5	3
MEAN :	6837	6835	6899	3435	3453	3510

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	3822	6124	3936	1424	1729	1938
15- 30	23	6015	6420	6409	2484	2670	2870
30- 45	38	6367	5999	6343	2767	2611	2662
45- 60	53	8116	8028	8930	2993	3103	3476
60- 75	68	11242	11252	11490	4744	4713	4806
75- 90	83	12803	12738	12470	5028	5247	5273
90- 105	98	13242	13265	13402	5586	5479	5586
105- 120	113	13017	13034	13160	5656	5486	5528
120- 135	128	13330	13400	13703	4855	4657	
135- 150	143	13393	11234	11227	4571	4530	
150- 165	158	13811	9235	9381	4092	4125	
165- 180	173	8705	8620	8572			
180- 195	188	8971	8128	9951			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP10
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
TIME :	1024	1102	931	1021	1634	1920
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6631	6740	6918	3467	3458	3404
2 :	6699	6835	6920	3446	3395	3507
3 :	6866	6700	6885	3451	3444	3536
4 :	6781	6853		3525	3366	
5 :					3457	
# OF COUNTS :	4	4	3	4	5	3
MEAN :	6744	6782	6908	3472	3424	3482

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	9205	9691	9406	3567	3755	4018
15- 30	23	10214	10062	10554	3864	3707	3920
30- 45	38	8146	7829	8400	3032	2909	3136
45- 60	53	7847	7538	8145	3074	3099	3336
60- 75	68	4100	4274	4365	1948	1744	1694
75- 90	83	2075	1969	2452	1010	1147	1194
90- 105	98	1707	1688	2221	957	1096	1216
105- 120	113	2272	2816	3097	1152	1339	1568
120- 135	128	9695	10608	11856	3911	4144	4541
135- 150	143	13813	13869	13672	5627	5653	5725
150- 165	158	14316	14188	14311	6285	6212	5816
165- 180	173	13508	13942	13758			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP11
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/12/85	7/26/85	8/7/85	9/26/85
TIME :	1037	1116	943	1027	1641	1926
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6760	6703	6865	3324	3443	3560
2 :	6774	6716	6943	3399	3359	3524
3 :	6884	6868	6808	3448	3298	3421
4 :	6806	6792		3485	3313	
5 :					3415	
# OF COUNTS :	4	4	3	4	5	3
MEAN :	6806	6770	6872	3414	3366	3502

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	6372	6340	6772	2214	2736	2768
15- 30	23	5900	5909	6477	2287	2573	2612
30- 45	38	4835	4805	5375	2085	2278	2158
45- 60	53	2811	2692	3267	1334	1584	1415
60- 75	68	2135	2067	2905	1162	1394	1277
75- 90	83	2130	2065	2623	1060	1338	1177
90- 105	98	5214	5392	7123	1725	2132	2145
105- 120	113	10420	10167	10507	4343	4223	4259
120- 135	128	10480	10442	10348	4412	4289	4336
135- 150	143	9543	9687	9859	3923	3986	4015
150- 165	158	6775	6757	6871	2892	2904	2981
165- 180	173	5823	7215	6909	3036	2969	3042
180- 195	188	3507					
195- 210	203	6560					
210- 225	218	11788					

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP12
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
TIME :	1050	1128	1016	1032	1649	1932
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6763	6671	6833	3418	3459	3458
2 :	6769	6813	6966	3418	3526	3458
3 :	6786	6967	6883	3447	3451	3516
4 :		6599		3395	3308	
5 :					3297	
# OF COUNTS :	3	4	3	4	5	3
MEAN :	6773	6763	6894	3420	3408	3477

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	8323	7040	6187	2418	2917	3160
15- 30	23	11636	11018	10008	4307	4691	4740
30- 45	38	11784	11310	11693	4785	4677	5681
45- 60	53	11667	11921	11870	4905	5094	5138
60- 75	68	10201	10740	10507	4202	4052	4051
75- 90	83	9966	9664	9463	3805	4079	4469
90- 105	98	13464	13258	13094	5364	5285	5405
105- 120	113	13715	13536	13945	5732	5709	5708
120- 135	128	11452	11448	11533	4931	4791	4900
135- 150	143	10756	10798	11948	4541	4417	4610
150- 165	158	11794	11800	12178	4780	4809	4917
165- 180	173	9652	9700	10246	4988	4945	4936
180- 195	188	8979	9000	9638			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP13
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
TIME :	1105	1142	1028	1038	1656	1938
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6780	6798	6922	3441	3458	3527
2 :	6627	6714	6799	3445	3400	3458
3 :	6660	6826	6870	3531	3356	3516
4 :		6754		3376	3360	
5 :					3292	
# OF COUNTS :	3	4	3	4	5	3
MEAN :	6689	6773	6864	3448	3373	3500

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	9502	8414	8136	3076	3202	3287
15- 30	23	10774	9910	9208	3738	3658	3773
30- 45	38	12155	11886	12106	4862	4857	4977
45- 60	53	13387	12308	12466	4994	4945	4968
60- 75	68	11652	11494	11289	4239	4312	4411
75- 90	83	10117	10810	11058	4230	4222	4423
90- 105	98	11575	12231	12464	4918	5016	5064
105- 120	113	13646	13588	13630	5614	5620	5707
120- 135	128	12207	12469	12733	5248	5261	5239
135- 150	143	8435	8538	9290	3681	3706	3580
150- 165	158	5596	5621	5710	2318	2418	2361
165- 180	173	5186	5036	5303	2007	2044	2183
180- 195	188	6685	5977	7399			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP14
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
TIME :	1118	1156	1040	1044	1704	1944
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6876	6673	6849	3420	3292	3500
2 :	6801	6789	6913	3442	3370	3460
3 :	6785	6785	6798	3553	3436	3585
4 :		6726		3485	3383	
5 :					3479	
# OF COUNTS :	3	4	3	4	5	3
MEAN :	6821	6743	6853	3475	3392	3515

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	9288	8886	9554	3260	3696	3854
15- 30	23	10379	10166	10121	4122	4027	4057
30- 45	38	10578	10803	10880	4239	4190	4431
45- 60	53	10719	10493	10731	4062	4242	4291
60- 75	68	6668	6367	6726	2953	2878	2778
75- 90	83	6759	7039	7104	2696	2724	2936
90- 105	98	11245	10912	11694	4429	4456	4634
105- 120	113	12691	12595	12943	5310	5321	5230
120- 135	128	14448	14076	14025	5510	5529	5746
135- 150	143	13655	13604	13731	5745	5571	5660
150- 165	158	13236	13002	13169	5443	5358	5506
165- 180	173	13104	13184	13194	5754	5886	5798
180- 195	188	13101	13017	13158			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP15
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
TIME :	1235	1210	1057	1050	1711	1950
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6608	6735	6955	3437	3462	3479
2 :	6695	6590	6946	3507	3479	3485
3 :	6800	6803	6892	3461	3522	3483
4 :	6705	6768		3463	3510	
5 :				3482	3480	
# OF COUNTS :	4	4	3	5	5	3
MEAN :	6702	6724	6931	3470	3491	3482

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	2666	2936	3147	991	1370	1518
15- 30	23	8102	8096	8072	2649	3036	3407
30- 45	38	9363	9444	9853	4001	4088	4124
45- 60	53	11809	12108	12131	4652	4836	5108
60- 75	68	12708	12878	13191	5311	5417	5470
75- 90	83	12411	12664	12853	5355	5145	5343
90- 105	98	12789	12937	13374	5305	5398	5406
105- 120	113	12813	12924	13109	5406	5389	5464
120- 135	128	13034	13038	13363	5594	5522	5636
135- 150	143	9790	11164	11034	5253	5342	5143
150- 165	158	7930	7881	8776	3368	3252	3748
165- 180	173	11476	11537	12374	5312	5537	5819
180- 195	188	8625	9423	10979			
195- 210	203	11353	12000	13028			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP16
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
TIME :	1355	1223	1110	1057	1718	1956
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6624	6870	6808	3482	3480	3540
2 :	6824	6898	6935	3374	3397	3518
3 :	6693	6727	6938	3420	3395	3607
4 :	6776	6653		3437	3526	
5 :					3341	
# OF COUNTS :	4	4	3	4	5	3
MEAN :	6729	6787	6894	3428	3428	3555

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	9183	9060	9254	3142	3467	3677
15- 30	23	8567	8596	8845	3505	3525	3652
30- 45	38	8474	8492	8767	3332	3383	3567
45- 60	53	11624	11647	11987	4677	4838	5087
60- 75	68	11604	11968	12524	5177	5050	5133
75- 90	83	12320	12127	12437	4901	5090	5018
90- 105	98	13081	13073	13344	5238	5341	5571
105- 120	113	13328	13256	13521	5628	5487	5665
120- 135	128	13235	13319	13707	5376	5512	5641
135- 150	143	13628	13821	14008	5668	5751	5860
150- 165	158	13076	13154	13700	6100	5723	6048
165- 180	173	12681	12712	13765			
180- 195	188	12555	12602	13045			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP17
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
TIME :	1300	1236	1122	1103	1725	2002
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6703	6754	6878	3486	3341	3452
2 :	6704	6809	6856	3522	3381	3502
3 :	6628	6752	6799	3426	3435	3597
4 :	6841	6607		3473	3336	
5 :					3444	
# OF COUNTS :	4	4	3	4	5	3
MEAN :	6719	6731	6844	3477	3387	3517

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	5640	5460	5913	1765	2250	2365
15- 30	23	9218	9382	9744	3774	3975	4021
30- 45	38	10710	10259	10563	4463	4526	4509
45- 60	53	10193	9691	9739	3712	3920	3984
60- 75	68	11507	11858	11809	4953	4879	5034
75- 90	83	12441	12233	12324	5066	4948	5192
90- 105	98	12320	12246	12419	5025	4982	5247
105- 120	113	12754	12738	13052	5127	5311	5286
120- 135	128	13717	13649	13936	5551	5489	5731
135- 150	143	13747	13906	13930	5776	5667	5609
150- 165	158	13387	13941	13948	5821	5670	5997
165- 180	173	11360	11190	11671	5583	5552	5765
180- 195	188	13781	13400	13422			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP18
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
TIME :	1618	1254	1222	1137	1759	2036
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6791	6747	6801	3379	3482	3549
2 :	6840	6891	6929	3425	3490	3520
3 :	6935	6699	6916	3439	3470	3600
4 :	6831	6745		3520	3403	
5 :	6636			3552	3382	
# OF COUNTS :	5	4	3	5	5	3
MEAN :	6807	6771	6882	3463	3445	3556

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	4094	3722	3425	1230	1261	1443
15- 30	23	9194	7551	7180	2978	2849	3287
30- 45	38	12000	11513	11635	4800	4740	4713
45- 60	53	11069	11174	11097	4668	4596	4722
60- 75	68	12637	12842	12806	5360	5217	5383
75- 90	83	11396	11757	12229	5144	5061	5027
90- 105	98	8503	9602	9880	4464	4461	4375
105- 120	113	5407	12738	7549	3030	2833	4172
120- 135	128	6191	13649	9205	4017	3948	4109
135- 150	143	3048	13906	13930	2457	2447	2331
150- 165	158	2501	13941	13948	1442	1287	
165- 180	173	2888	11190	11671	1127	1081	
180- 195	188	5695	13400	13422	1537	1618	

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP19
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
TIME :	1605	1303	1208	1130	1751	2028
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6648	6788	6886	3514	3407	3589
2 :	6815	6765	6974	3548	3485	3464
3 :	6861	6786	6794	3508	3425	3583
4 :	6831	6758	6871	3545	3490	
5 :				3379	3460	
# OF COUNTS :	4	4	4	5	5	3
MEAN :	6789	6774	6881	3499	3453	3545

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	6689	6684	6475	2511	2873	3079
15- 30	23	11369	11476	11350	4723	4632	4955
30- 45	38	9522	9561	9461	3834	3903	4029
45- 60	53	11293	11072	11355	5380	4410	4554
60- 75	68	12603	13063	13025	5087	5250	5330
75- 90	83	13327	13494	13772	5654	5386	5585
90- 105	98	13512	13587	13651	5546	5551	5607
105- 120	113	13581	13555	13618	5588	5490	5756
120- 135	128	12015	10975	12023	5032	5119	5105
135- 150	143	6551	6107	6620	2583	2546	2607
150- 165	158	12235	12018	12622	4770	4820	5048
165- 180	173	11547	11811	12118	5012	4972	4889
180- 195	188	15561	16632	15889	4618	4404	4288

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP20
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
TIME :	1542	1319	1157	1123	1745	2021
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6657	6923	6887	3368	3439	3545
2 :	6929	7014	6877	3490	3455	3598
3 :	6897	6854	6906	3382	3421	3596
4 :	6812	6788		3438	3485	
5 :		6723		3514	3420	
# OF COUNTS :	4	5	3	5	5	3
MEAN :	6824	6860	6890	3438	3444	3580

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	8689	8331	7953	3223	3540	3683
15- 30	23	10311	9941	9896	4246	4331	4357
30- 45	38	12042	11983	11803	4937	4888	5157
45- 60	53	13145	13345	12943	5237	5291	5362
60- 75	68	13571	12992	13252	5504	5401	5567
75- 90	83	13635	12001	13159	5428	5309	5325
90- 105	98	12005	11391	12229	5115	4897	5007
105- 120	113	11286	12118	11963	4831	4711	4903
120- 135	128	12066	11490	12487	5250	5198	5141
135- 150	143	11492	12316	11850	4601	4688	4741
150- 165	158	12126	12685	13014	5227	5240	5118
165- 180	173	12128	13200	14681	4170	3972	4032

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP21
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
TIME :	1518	1335	1145	1117	1738	2014
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6612	6703	6771	3311	3433	3535
2 :	6734	6754	6746	3418	3464	3523
3 :	6799	6740	6840	3498	3394	3586
4 :	6731	6681		3368	3455	
5 :					3500	
# OF COUNTS :	4	4	3	4	5	3
MEAN :	6719	6720	6786	3399	3449	3548

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	8609	6751	6583	3465	3845	3920
15- 30	23	9607	9504	9473	3637	3642	3750
30- 45	38	10577	10029	10132	4296	4375	4537
45- 60	53	11919	11627	11745	5187	5235	5380
60- 75	68	13770	13477	13392	5657	5653	5769
75- 90	83	14954	14665	14903	6144	6068	6211
90- 105	98	14490	14761	14759	6014	6134	6225
105- 120	113		14204	14246	5679	5775	5702
120- 135	128		11242	11803	3931	3653	3553
135- 150	143		7531	7881	2442	2354	2387
150- 165	158		10046	11658	3431	3634	3830
165- 180	173				4882		

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP21A
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
TIME :	1505	1348	1136	1113	1732	2009
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6671	6750	6829	3500	3475	3575
2 :	6780	6778	6895	3518	3387	3450
3 :	6674	6686	6697	3475	3464	3538
4 :		6862	7031	3311	3302	
5 :					3315	
# OF COUNTS :	3	4	4	4	5	3
MEAN :	6708	6769	6863	3451	3389	3521

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	9619	9512	10041	2544	3533	4051
15- 30	23	11705	12001	12959	4268	5147	5418
30- 45	38	10985	11149	12413	4120	5193	5496
45- 60	53	10315	10933	12786	4167	4953	5280
60- 75	68	11378	11970	13462	4673	5209	5478
75- 90	83	12054	12551	13754	5083	5541	5791
90- 105	98	13179	13274	14042	5606	5556	5834
105- 120	113	13666	13426	13706			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP22
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
TIME :	838	1041	905	1009	1620	1906
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6802	6854	7002	3393	3463	3471
2 :	6775	6888	6828	3404	3400	3579
3 :	6664	6705	6905	3497	3444	3590
4 :	6732	6773		3480	3539	
5 :	6908				3407	
# OF COUNTS :	5	4	3	4	5	3
MEAN :	6776	6805	6912	3444	3451	3547

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	6902	6634	6636	2295	2490	2815
15- 30	23	8366	8345	8616	3209	3299	3629
30- 45	38	10522	10199	10620	3713	3780	4157
45- 60	53	13353	13424	13417	5244	5319	5508
60- 75	68	12523	12510	12530	5293	5212	5266
75- 90	83	11224	11064	11326	4486	4547	4664
90- 105	98	12557	12299	12662	4974	4974	5199
105- 120	113	12469	12557	12102	5272	5310	5488
120- 135	128	11612	11533	11855	4611	4487	4625
135- 150	143	13411	13052	13396	5381	5331	5432
150- 165	158	11971	11900	11942	5475	5377	5223
165- 180	173	12166	11200	10266	3931	3823	3955
180- 195	188	13150		10895			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP23
PROJECT NAME: SILVER BOW CREEK - TAILINGS

DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
TIME :	937	1028	850	1002	1613	1900
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6836	6748	6972	3420	3472	3512
2 :	6842	6723	6945	3405	3381	3485
3 :	6781	6809	6826	3526	3519	3534
4 :	6721	6862	6976	3434	3376	
5 :		6787	6924	3488	3604	
# OF COUNTS :	4	5	5	5	5	3
MEAN :	6795	6786	6929	3455	3470	3510

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	10599	10815	10997	2779	2857	3344
15- 30	23	9765	10360	9629	4764	4719	4790
30- 45	38	10870	10173	10578	3926	3984	4001
45- 60	53	11831	11097	12016	5110	5191	5177
60- 75	68	10090	10094	10166	4081	3958	3885
75- 90	83	13009	13027	13122	5106	5259	5288
90- 105	98	13343	13458	13447	5353	5449	5609
105- 120	113	9786	9058	9251	5171	5069	4829
120- 135	128	12661	12830	12902	4096	4101	4372
135- 150	143	13259	13396	13303	5476	5481	5553
150- 165	158	13428	13227	13236	5482	5472	5567
165- 180	173	10702	9606	9487	5316	5434	5331
180- 195	188		8177	8582			

SCHAFER AND ASSOCIATES
8601 PANORAMA EAST DRIVE
BOZEMAN MONTANA

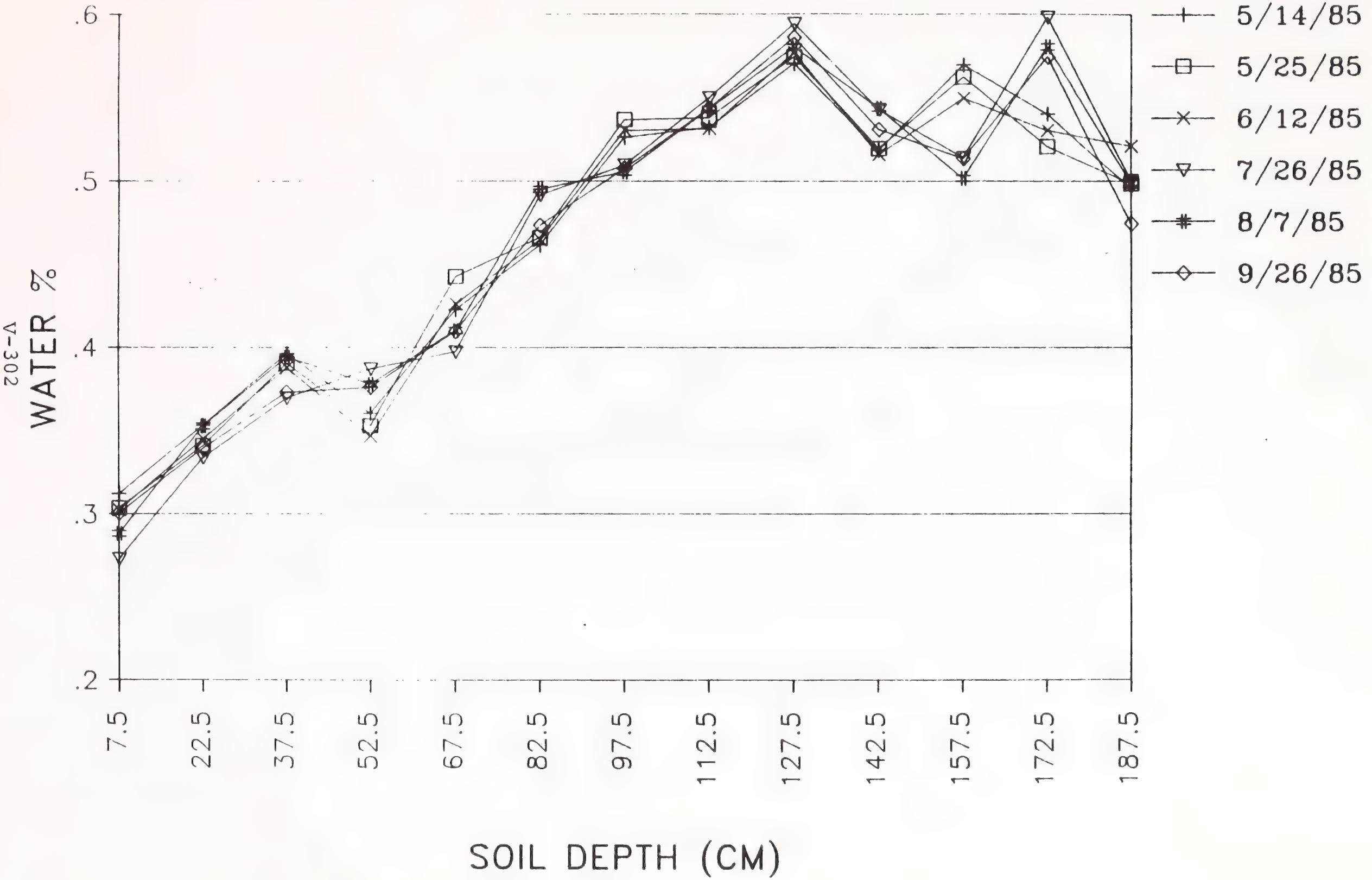
NEUTRON ATTENUATION DATA ANALYSIS

ACCESS TUBE NUMBER: NP24
PROJECT NAME: SILVER BOW CREEK TAILINGS

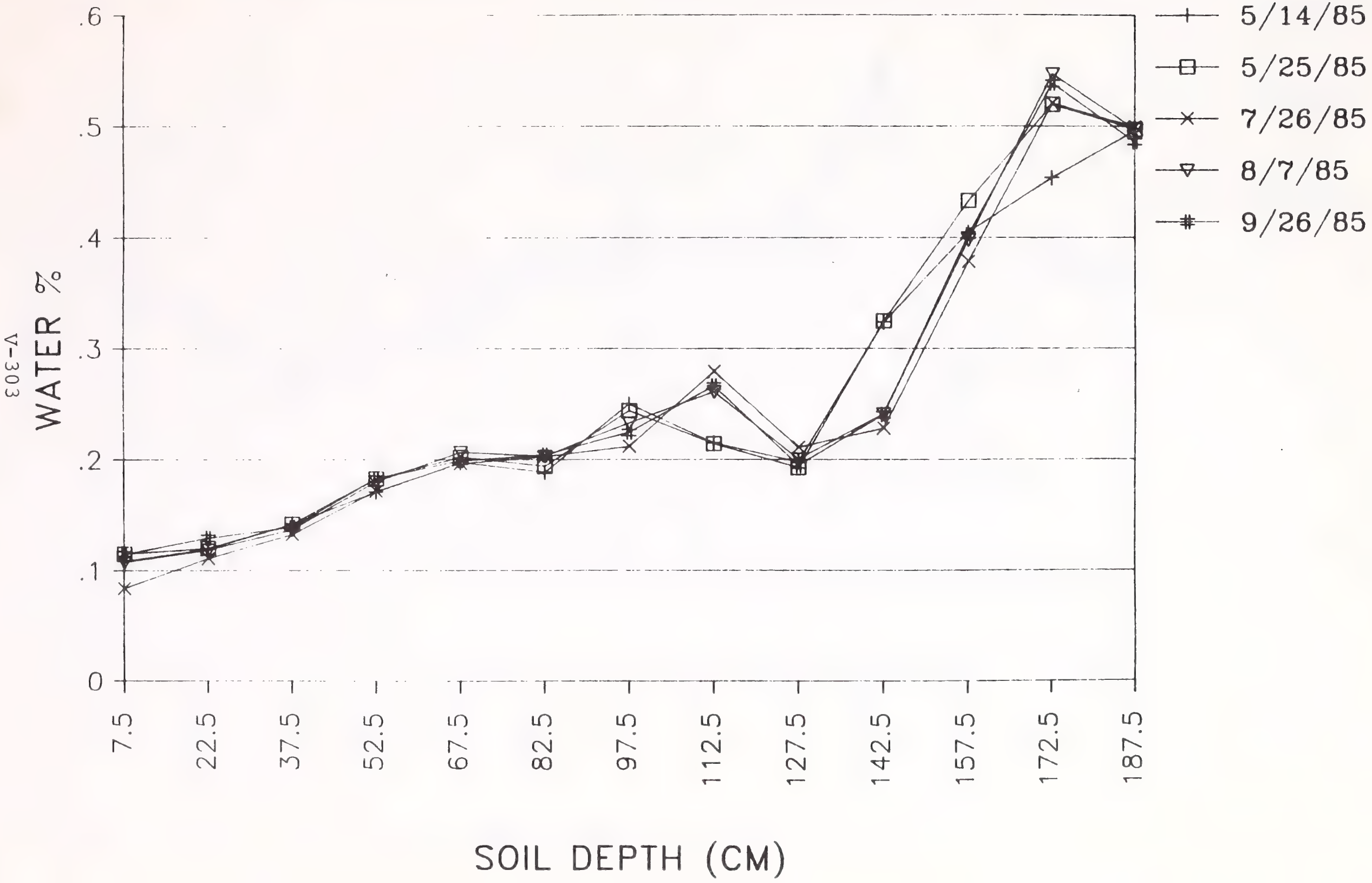
DATE :	5/14/85	5/25/85	6/13/85	7/26/85	8/7/85	9/26/85
TIME :	950	1010	833	954	1605	1850
USER :	WMS	WMS	WMS	WMS	WMS	WMS
PROBE NUMBER :	SA01	SA01	SA01	SA01	SA01	SA01
CALIBRATION :						
A :	.044	.044	.044	.027	.027	.027
B :	.261	.261	.261	.334	.334	.334
SHIELD COUNTS :						
1 :	6721	6684	6854	3355	3426	3362
2 :	6850	6744	6845	3366	3467	3495
3 :	6714	6925	6929	3390	3460	3478
4 :	6797	6826	6930	3378	3391	
5 :		6879		3368	3472	
# OF COUNTS :	4	5	4	5	5	3
MEAN :	6771	6812	6890	3371	3443	3445

DEPTH (cm)	MEAN DEPTH	FIELD COUNTS (COUNTS/30 SEC.)					
0- 15	8	7111	7182	6636	1758	2389	2698
15- 30	23	10391	10372	10377	4580	4565	4285
30- 45	38	10660	10383	10700	3916	4302	4511
45- 60	53	14113	13864	13909	5638	5587	5713
60- 75	68	13374	13008	13490	5588	5579	5601
75- 90	83	11231	10941	11273	5201	4989	4819
90- 105	98	5752	5532	5410	2814	2822	2521
105- 120	113	5279	5318	5115	2361	2432	2441
120- 135	128	3082	2956	3067	1526	1494	1453
135- 150	143	3169	3217	3197	1439	1479	1474
150- 165	158	2827	2738	2849	1353	1306	1296
165- 180	173	2933	2888	2893	1331	1259	1318
180- 195	188	4364	3811	4034	1438	1410	1439
195- 210	203	8736	7221	9057	1788	1984	1960

PLOT OF SOIL MOISTURE CONTENT VS. DEPTH AT NP-01 ; SILVER BOW CREEK RI.

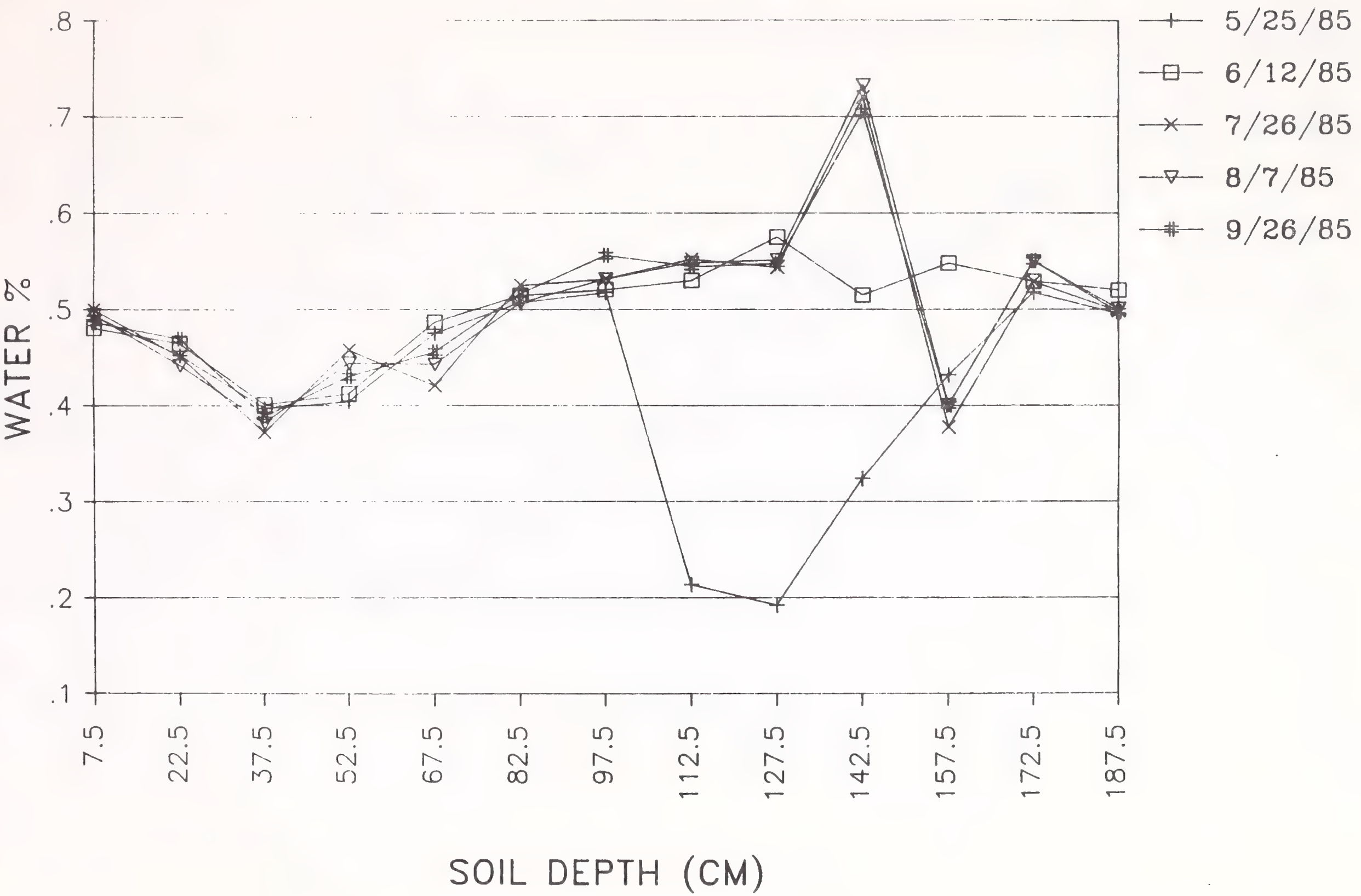


PLOT OF SOIL MOISTURE CONTENT VS. DEPTH AT NP-02 ; SILVER BOW CREEK RI.

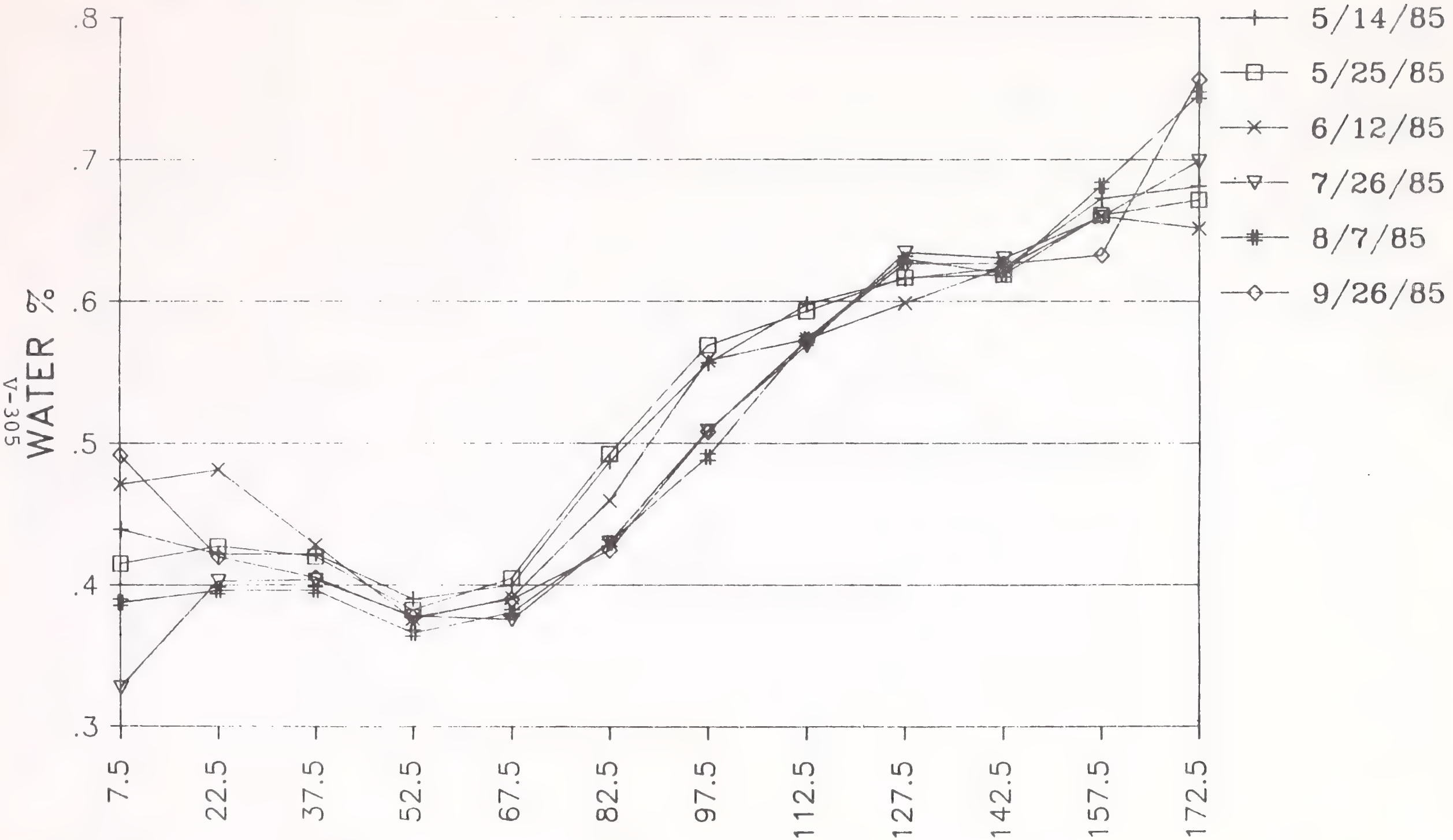


V-303

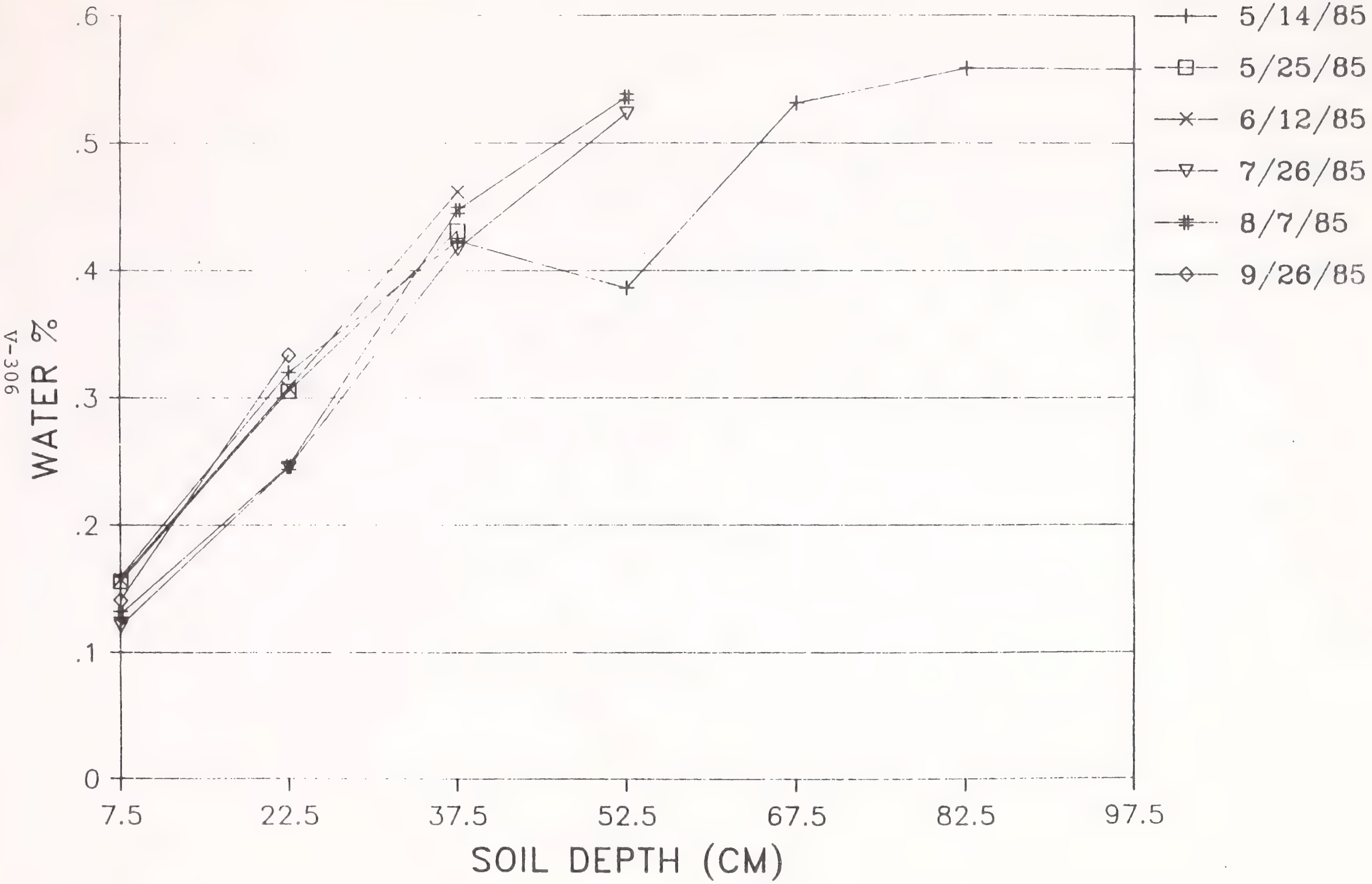
PLOT OF SOIL MOISTURE CONTENT
VS. DEPTH AT NP-03 ; SILVER BOW CREEK RI.



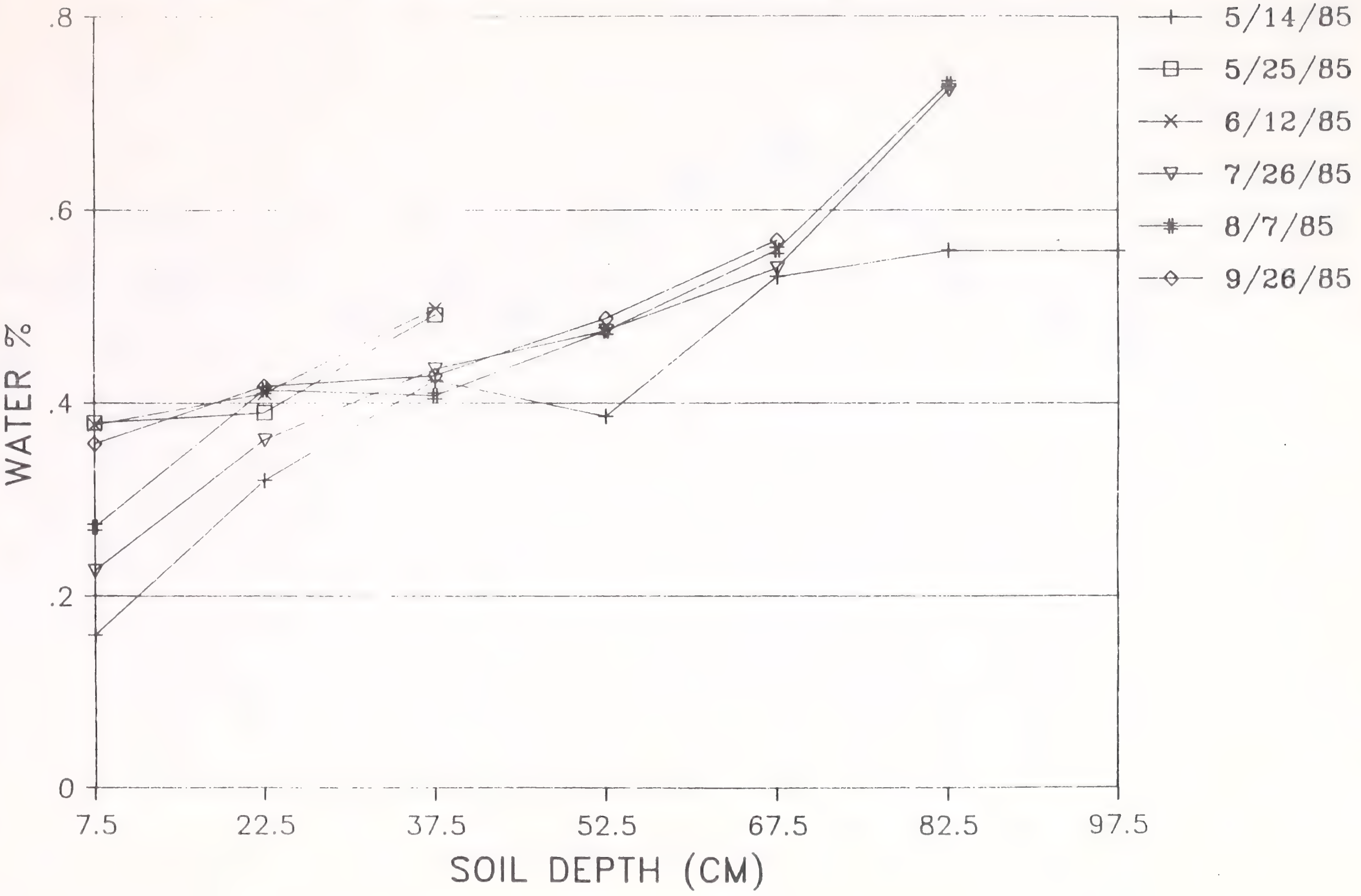
PLOT OF SOIL MOISTURE CONTENT
VS. DEPTH AT NP-04 ; SILVER BOW CREEK RI.



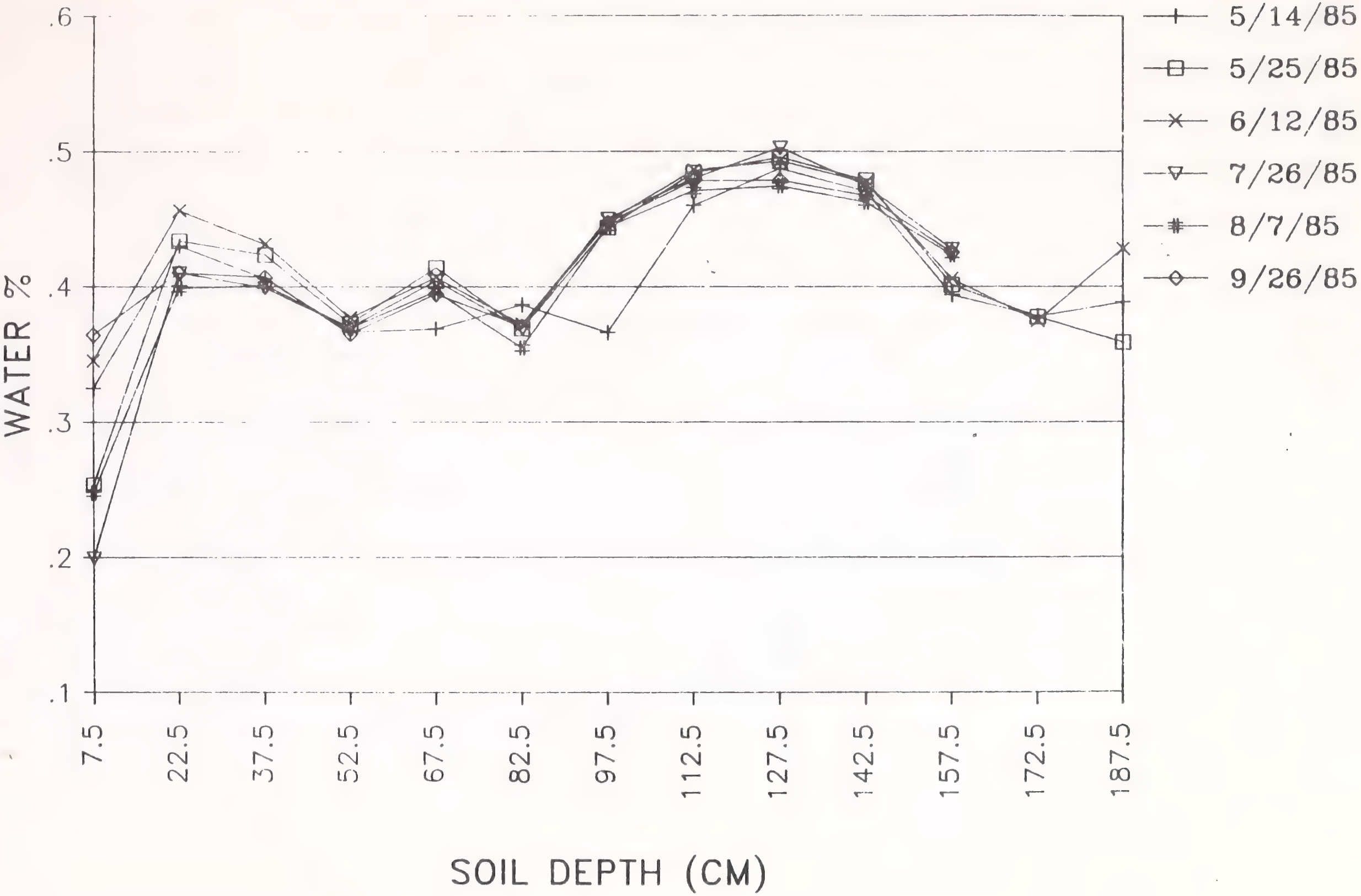
PLOT OF SOIL MOISTURE CONTENT
VS. DEPTH AT NP-05 ; SILVER BOW CREEK RI.



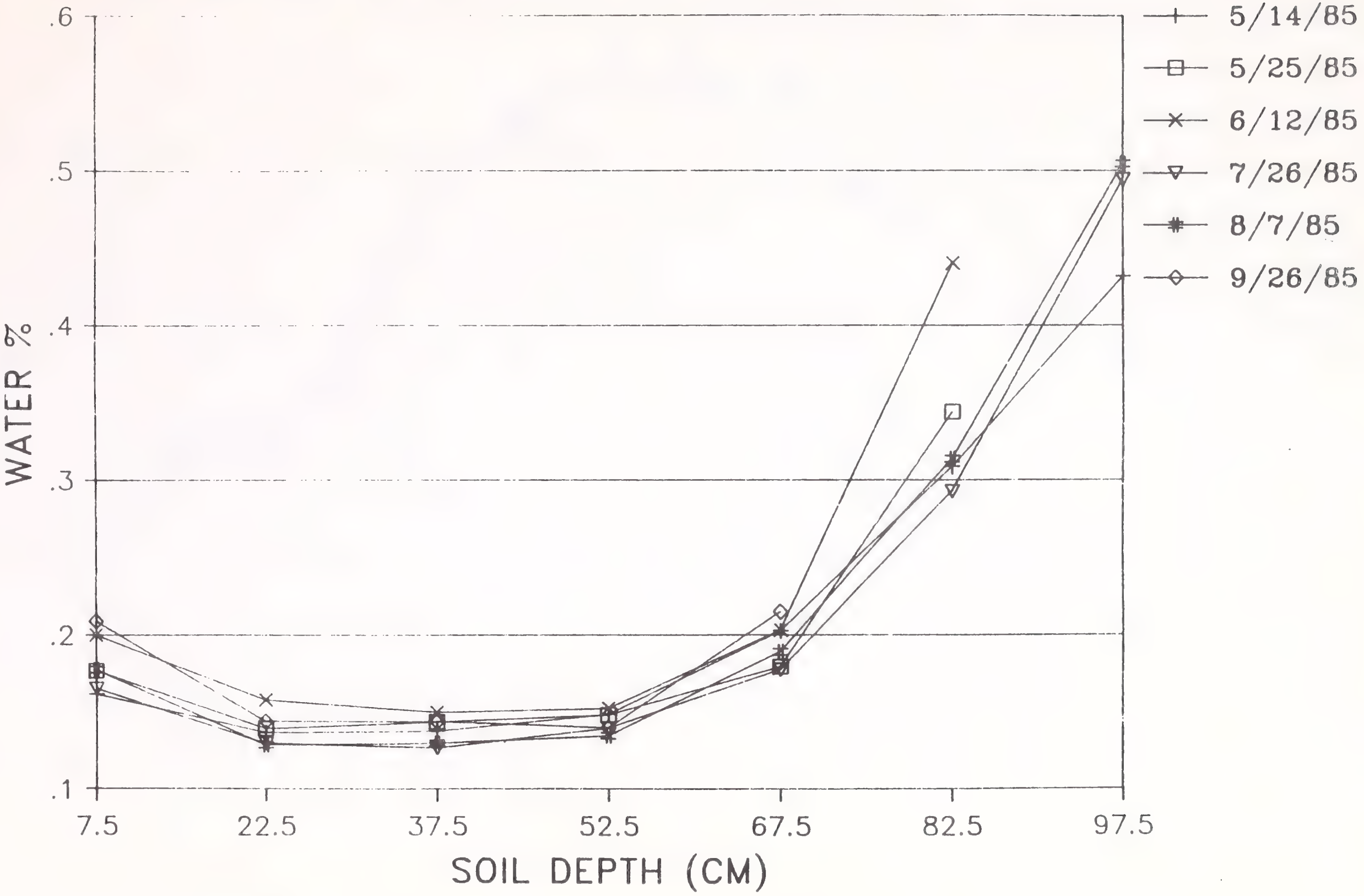
PLOT OF SOIL MOISTURE CONTENT
VS. DEPTH AT NP-06 ; SILVER BOW CREEK RI.



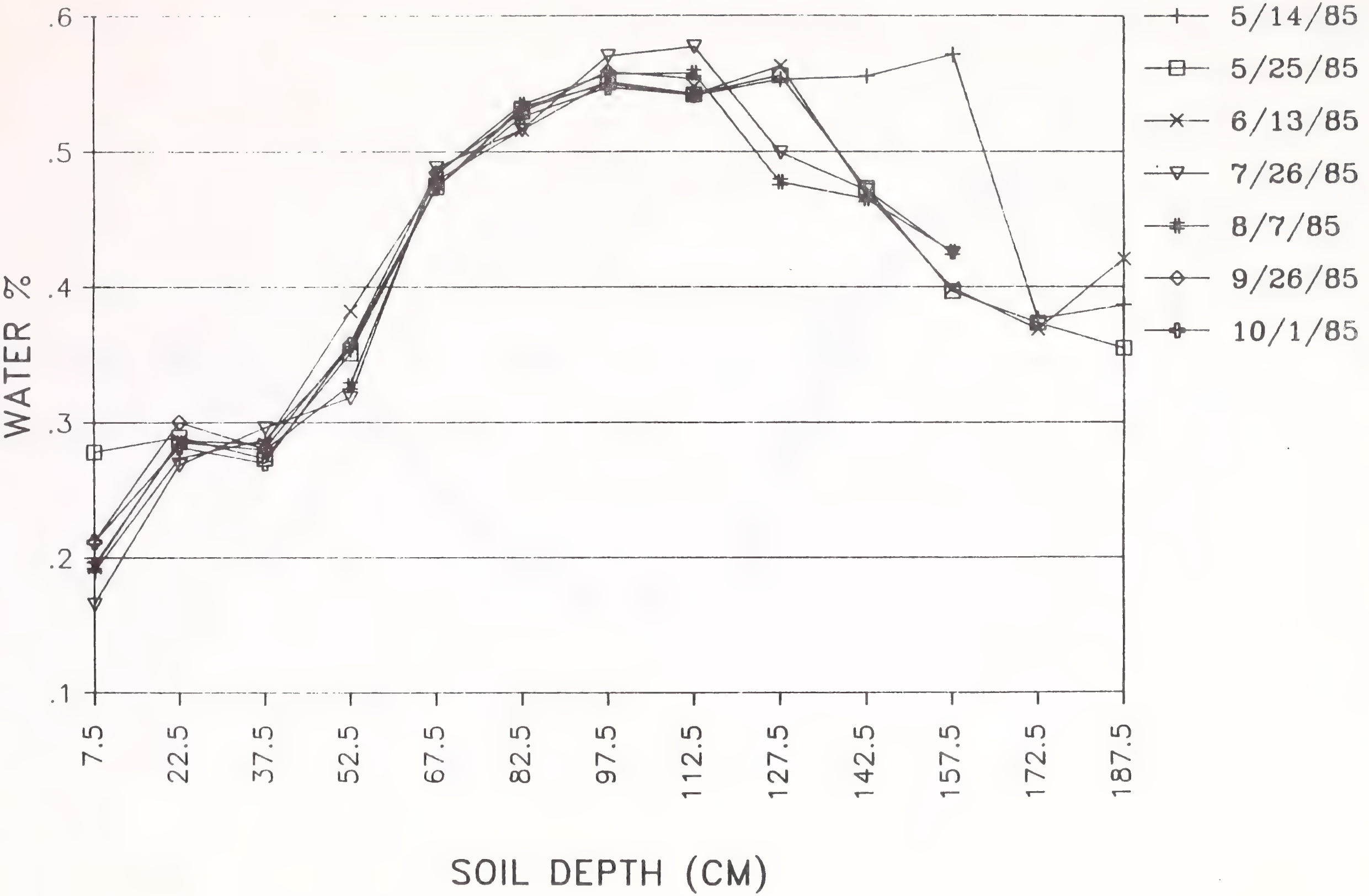
PLOT OF SOIL MOISTURE CONTENT VS. DEPTH AT NP-07 ; SILVER BOW CREEK RI.



PLOT OF SOIL MOISTURE CONTENT
VS. DEPTH AT NP-08 ; SILVER BOW CREEK RI.

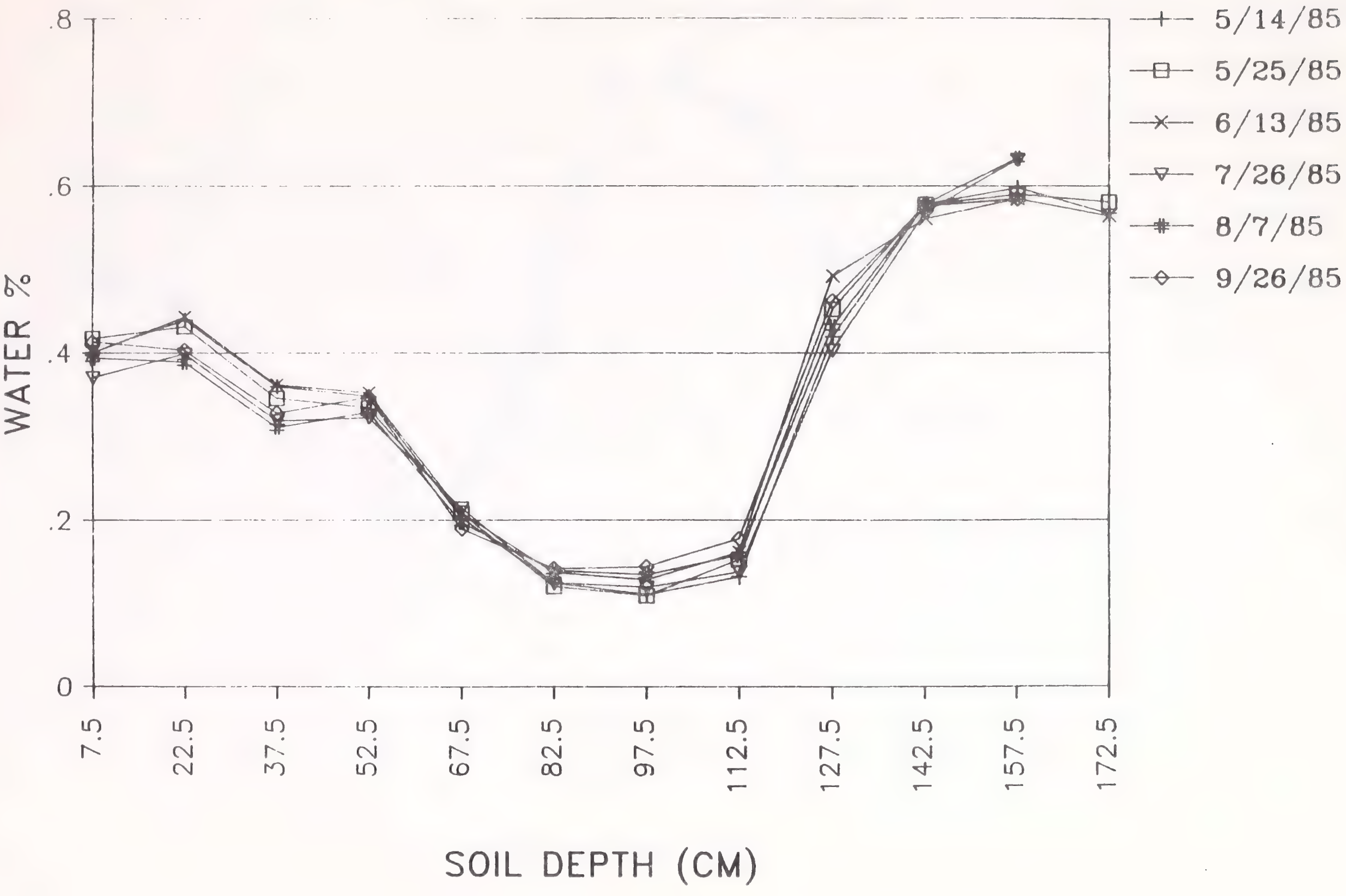


PLOT OF SOIL MOISTURE CONTENT VS. DEPTH AT NP-09 ; SILVER BOW CREEK RI.



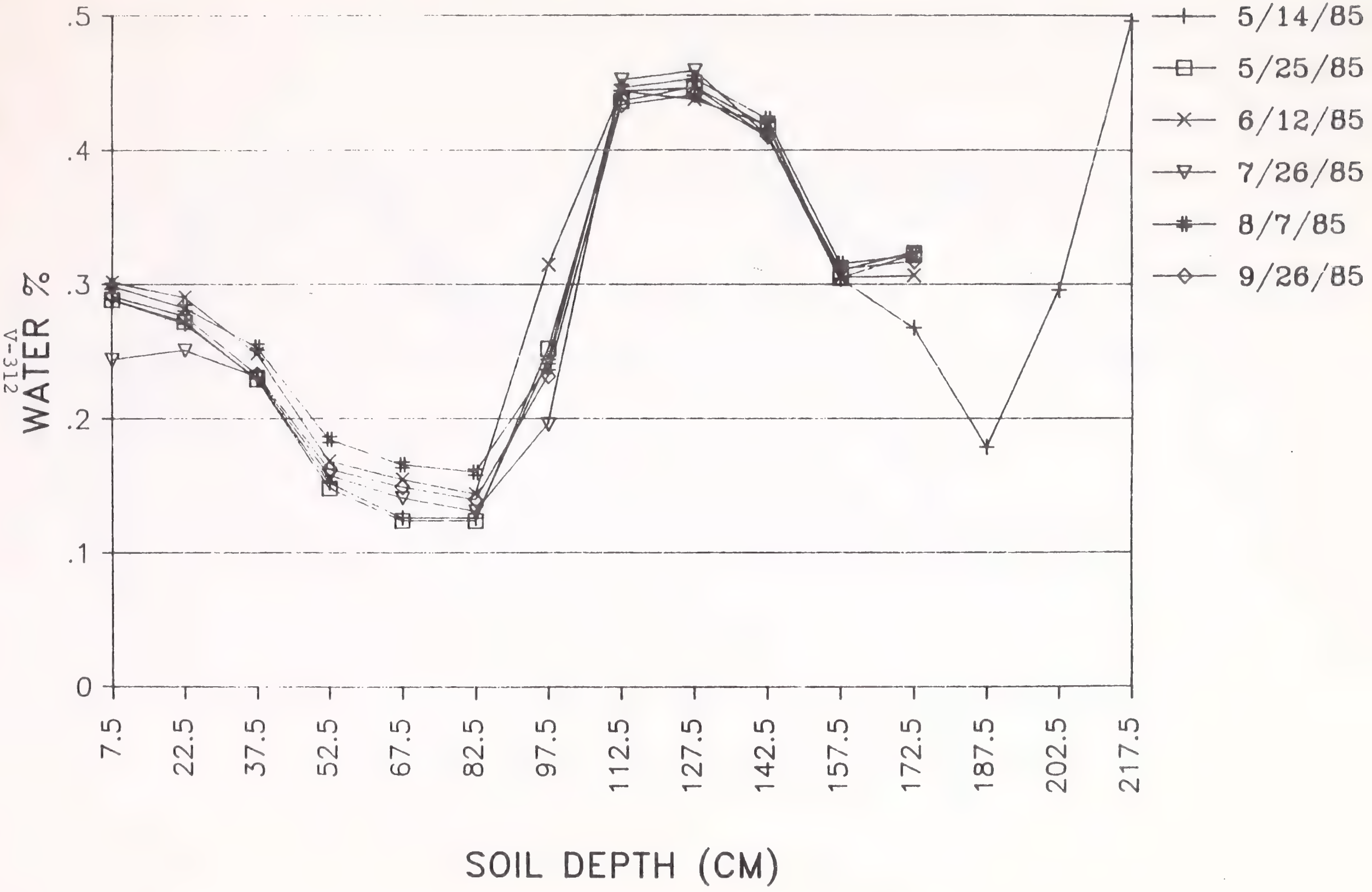
V-310

PLOT OF SOIL MOISTURE CONTENT
VS. DEPTH AT NP-10 ; SILVER BOW CREEK RI.

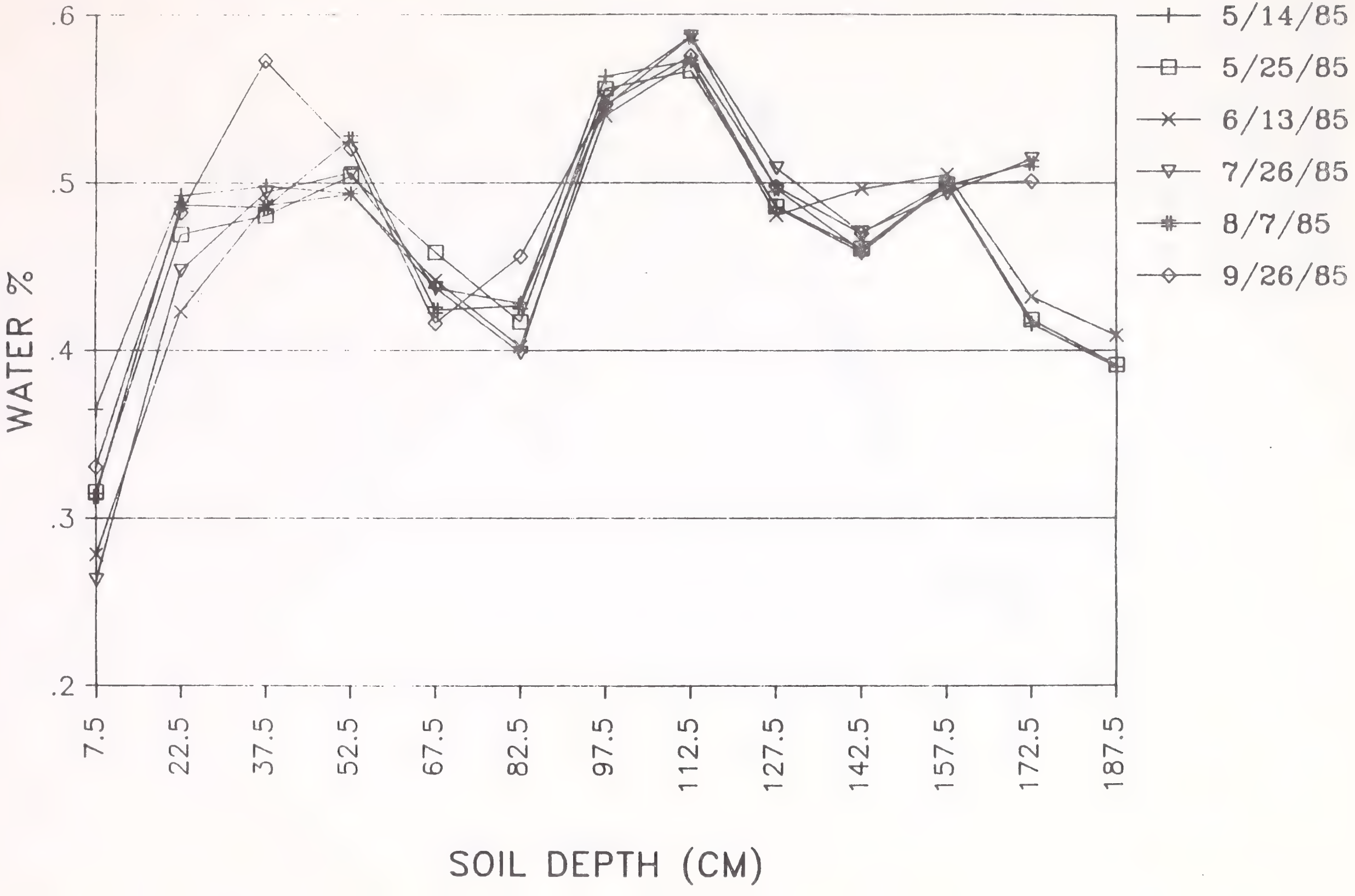


V-311

PLOT OF SOIL MOISTURE CONTENT VS. DEPTH AT NP-11 ; SILVER BOW CREEK RI.

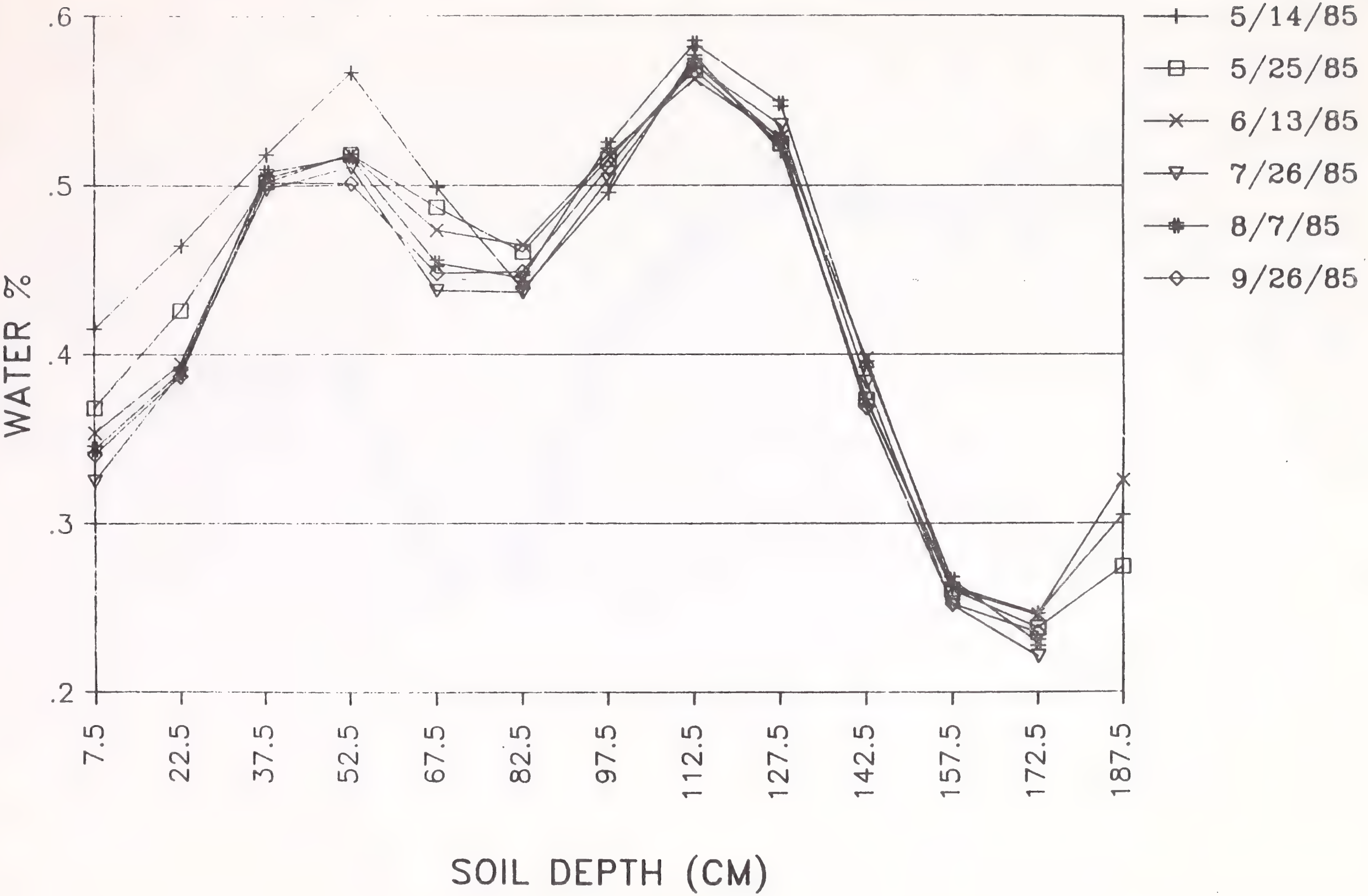


PLOT OF SOIL MOISTURE CONTENT VS. DEPTH AT NP-12 ; SILVER BOW CREEK RI.

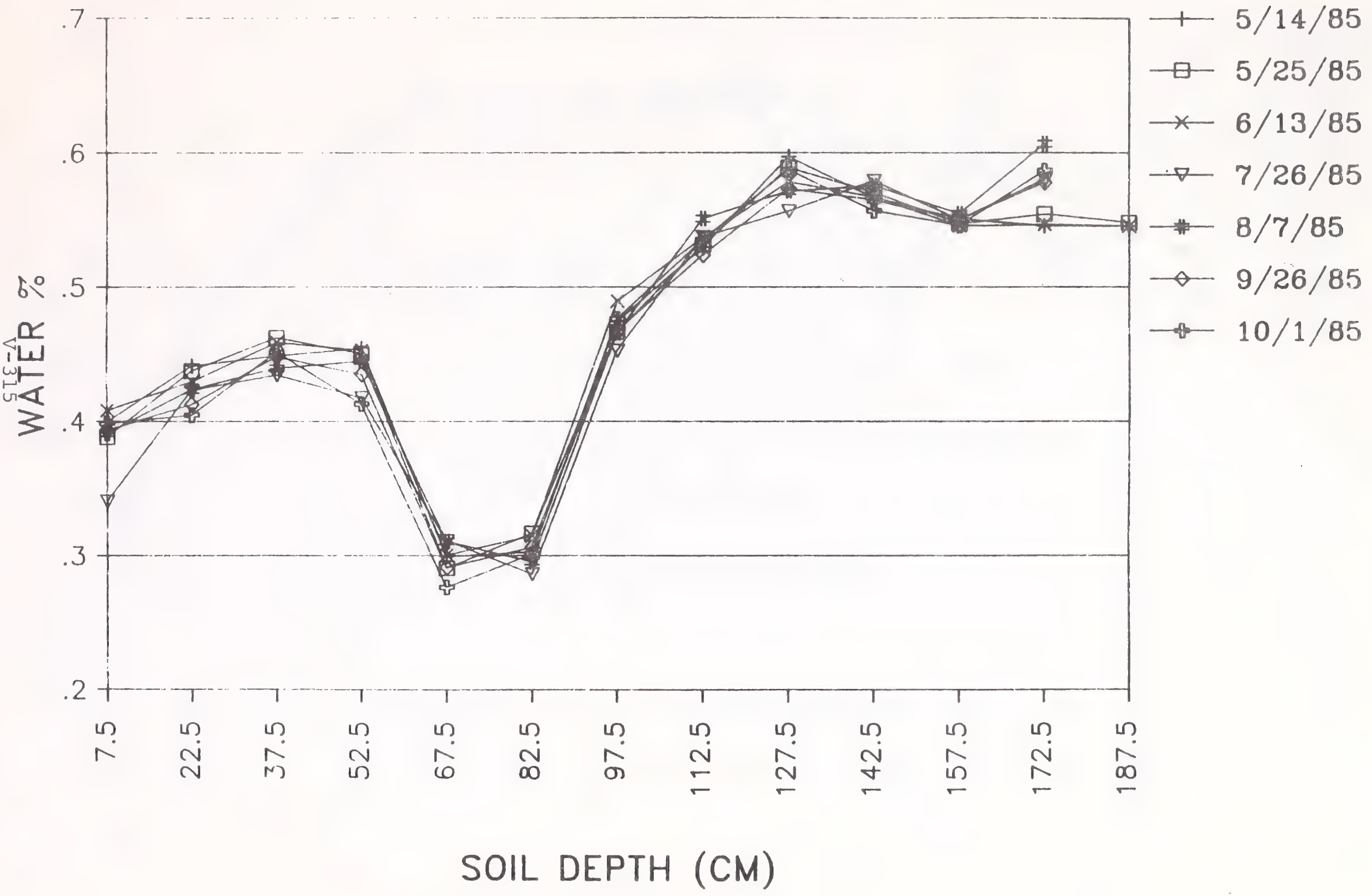


V-313

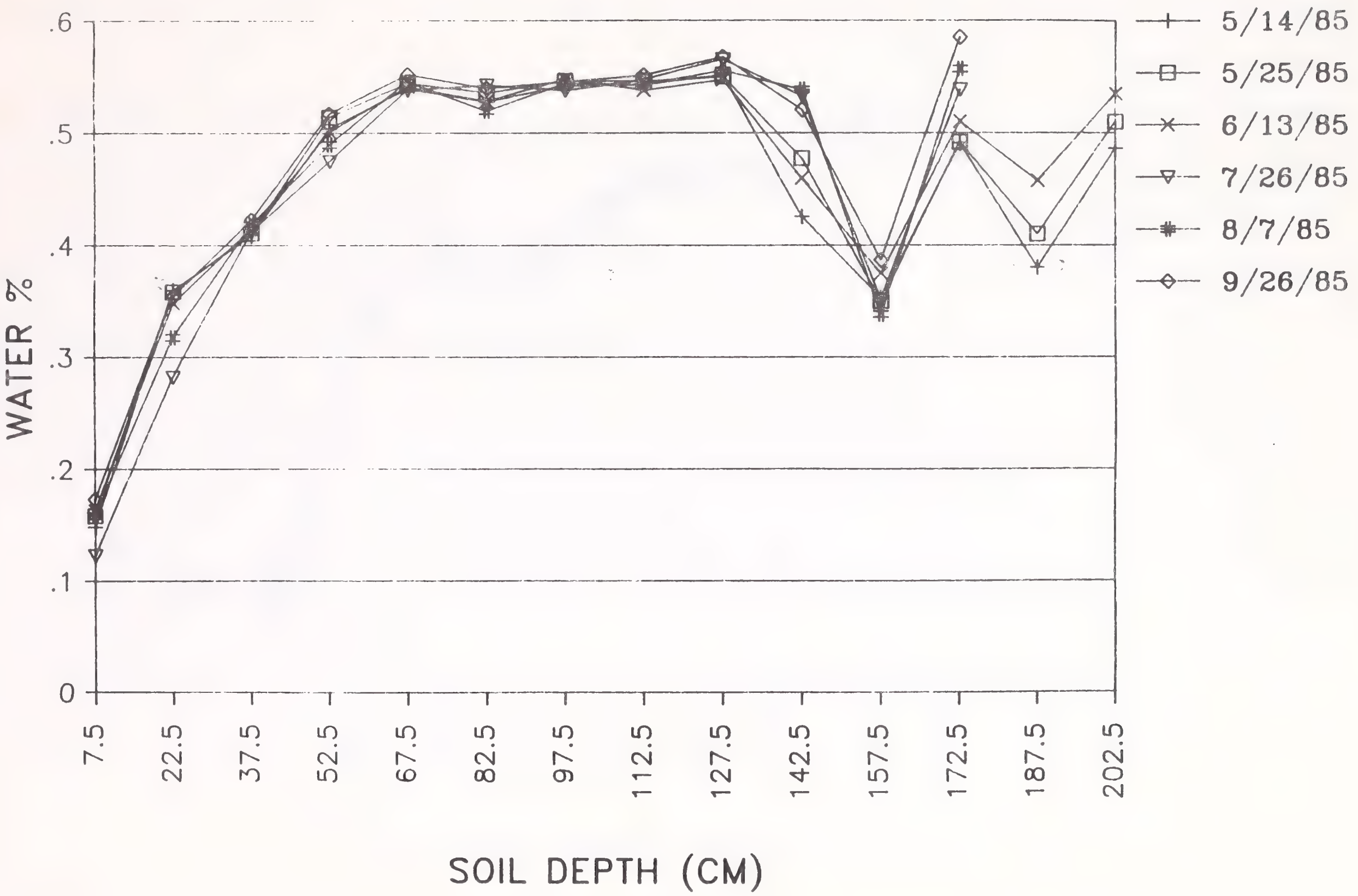
PLOT OF SOIL MOISTURE CONTENT
VS. DEPTH AT NP-13 ; SILVER BOW CREEK RI.



PLOT OF SOIL MOISTURE CONTENT
VS. DEPTH AT NP-14 ; SILVER BOW CREEK RI.

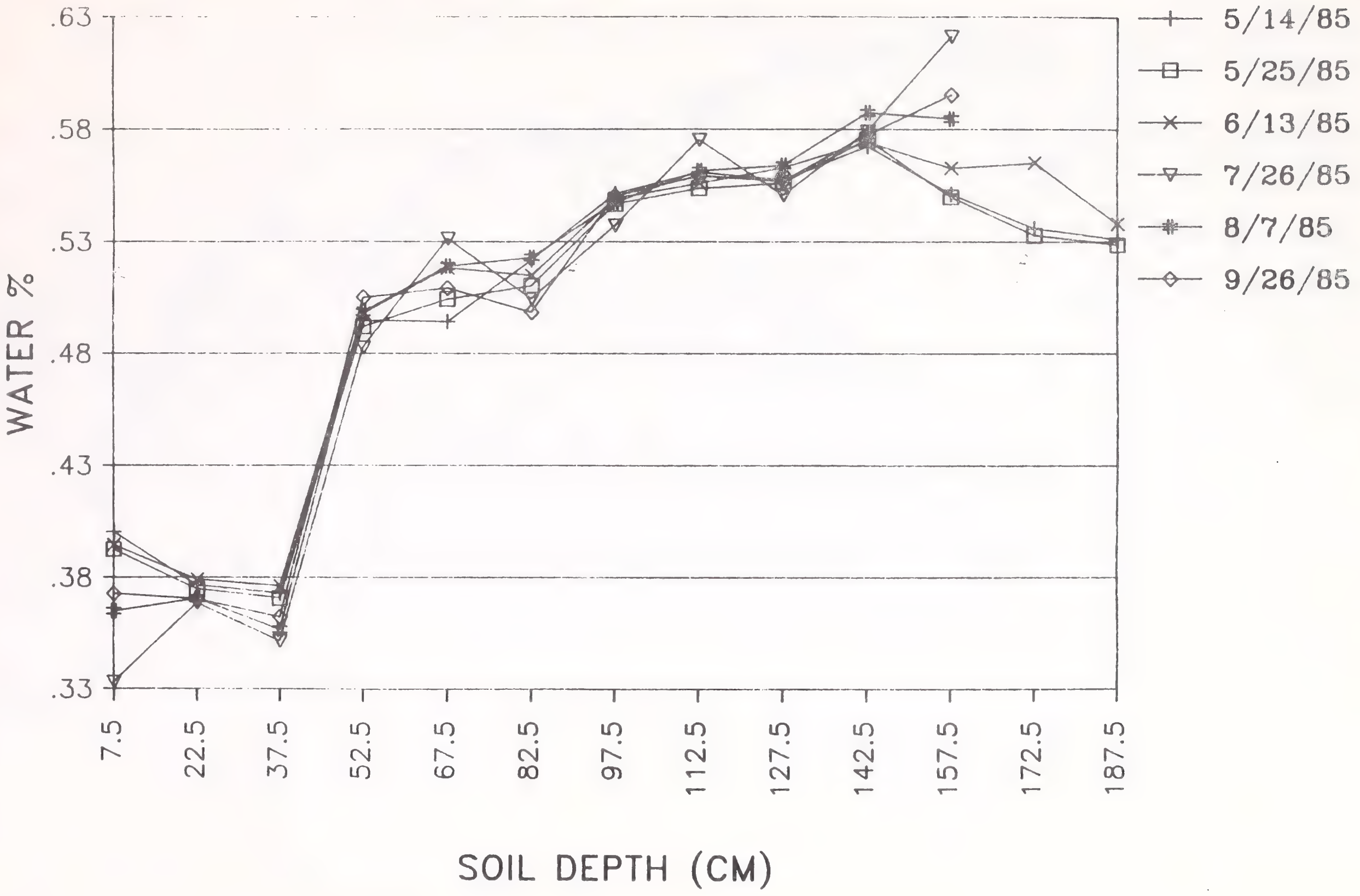


PLOT OF SOIL MOISTURE CONTENT VS. DEPTH AT NP-15 ; SILVER BOW CREEK RI.

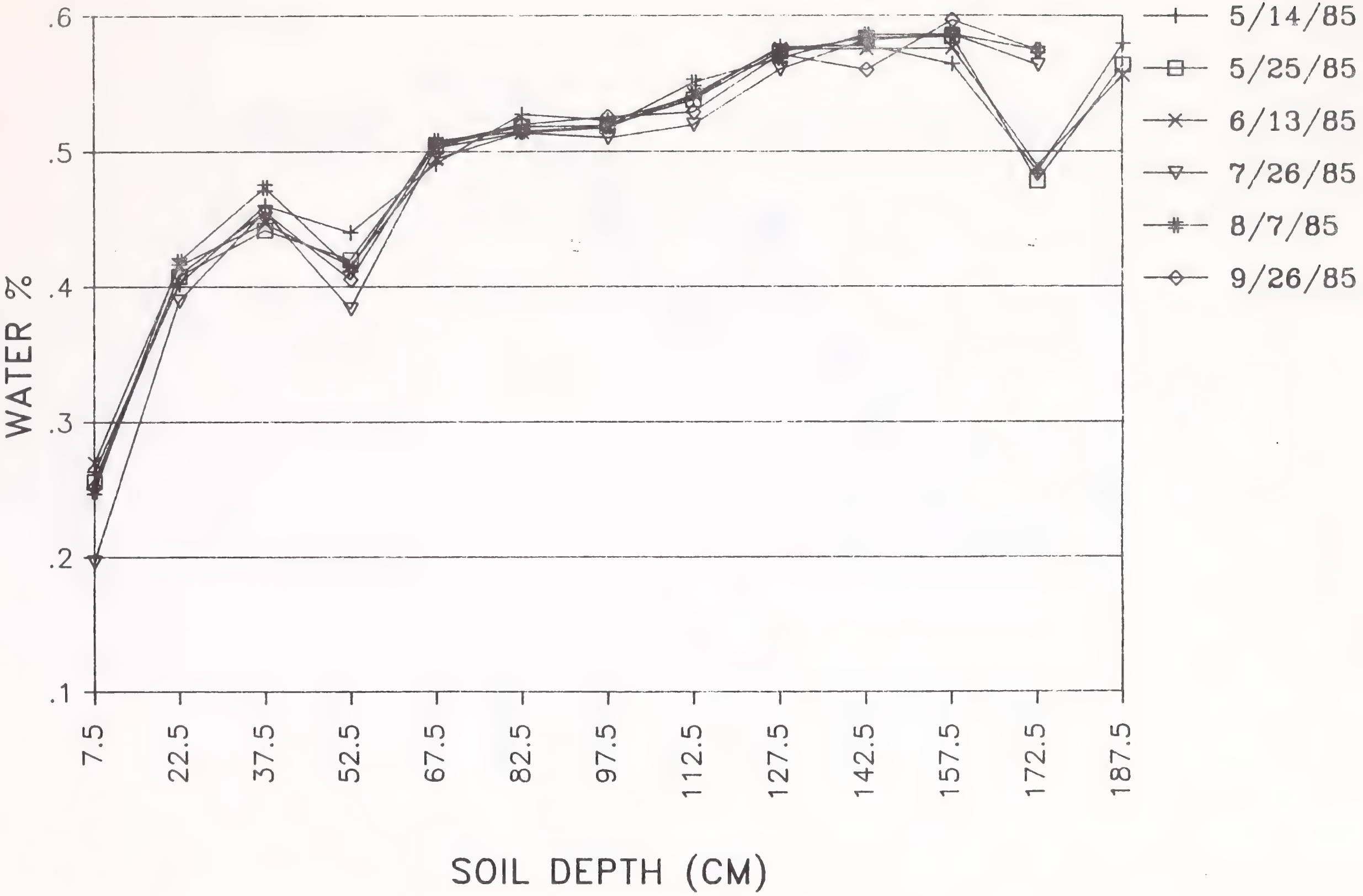


V-3168

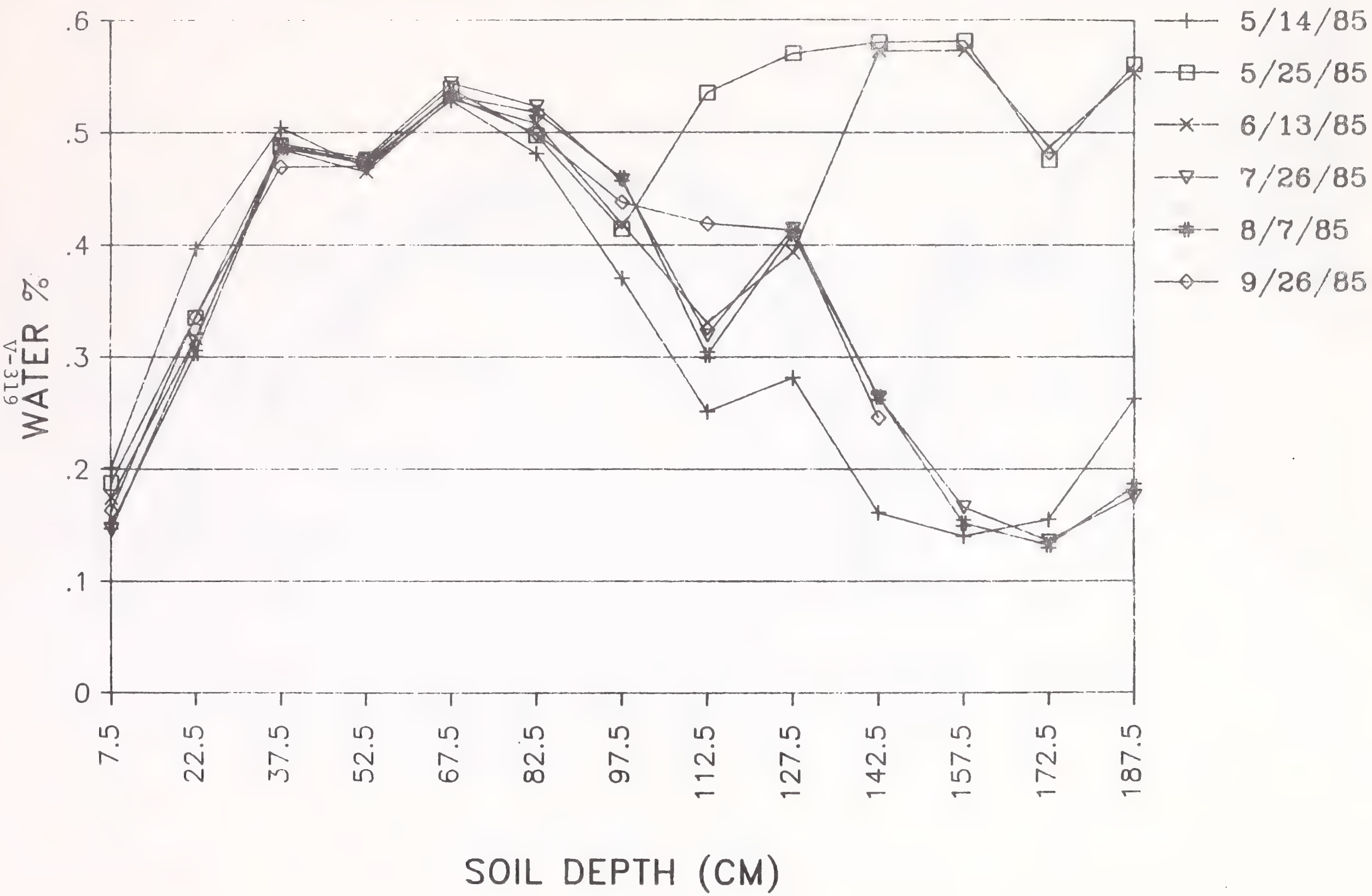
PLOT OF SOIL MOISTURE CONTENT VS. DEPTH AT NP-16 ; SILVER BOW CREEK AI.



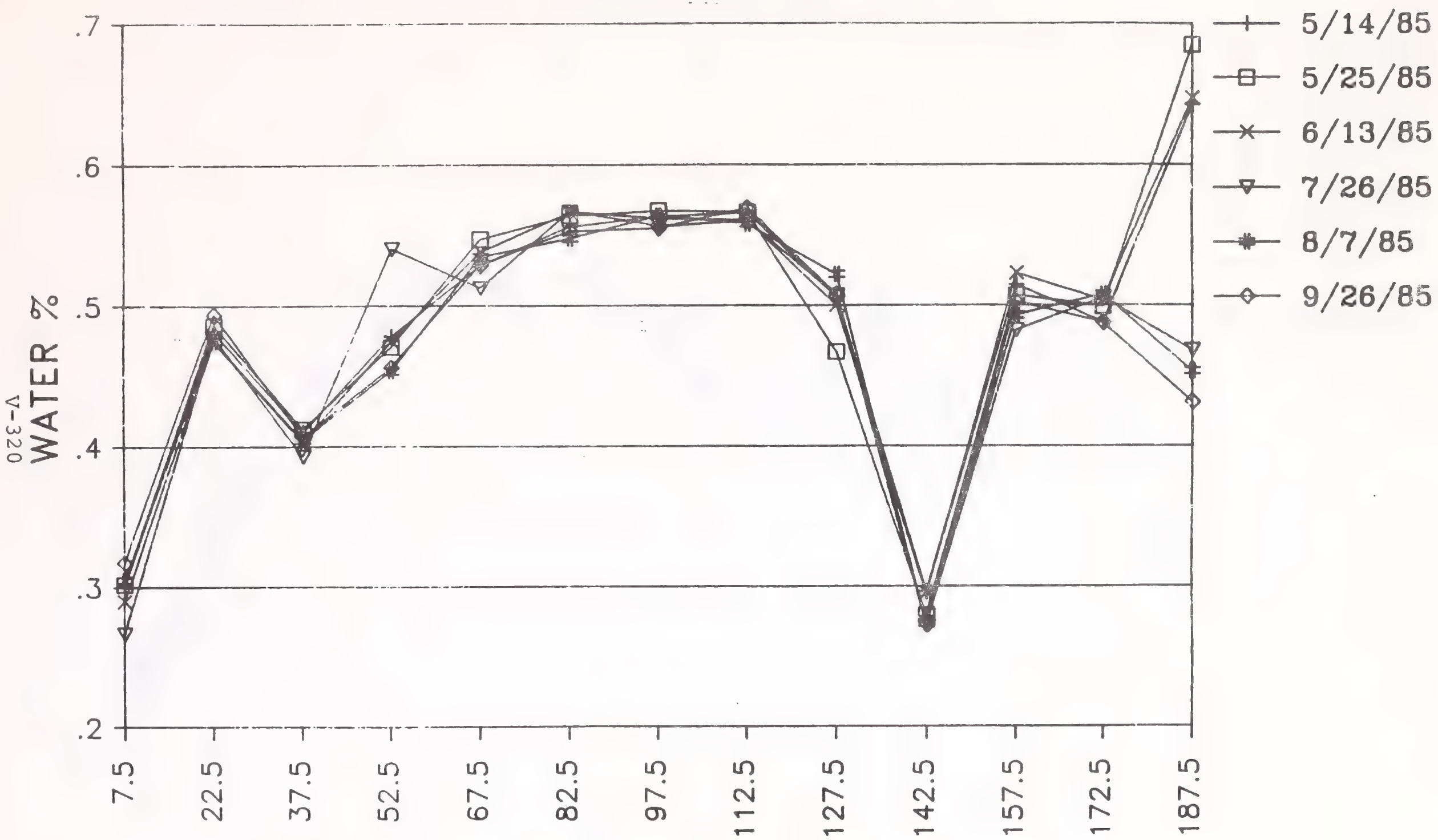
PLOT OF SOIL MOISTURE CONTENT VS. DEPTH AT NP-17 ; SILVER BOW CREEK RI.



PLOT OF SOIL MOISTURE CONTENT
VS. DEPTH AT NP-18 ; SILVER BOW CREEK RI.

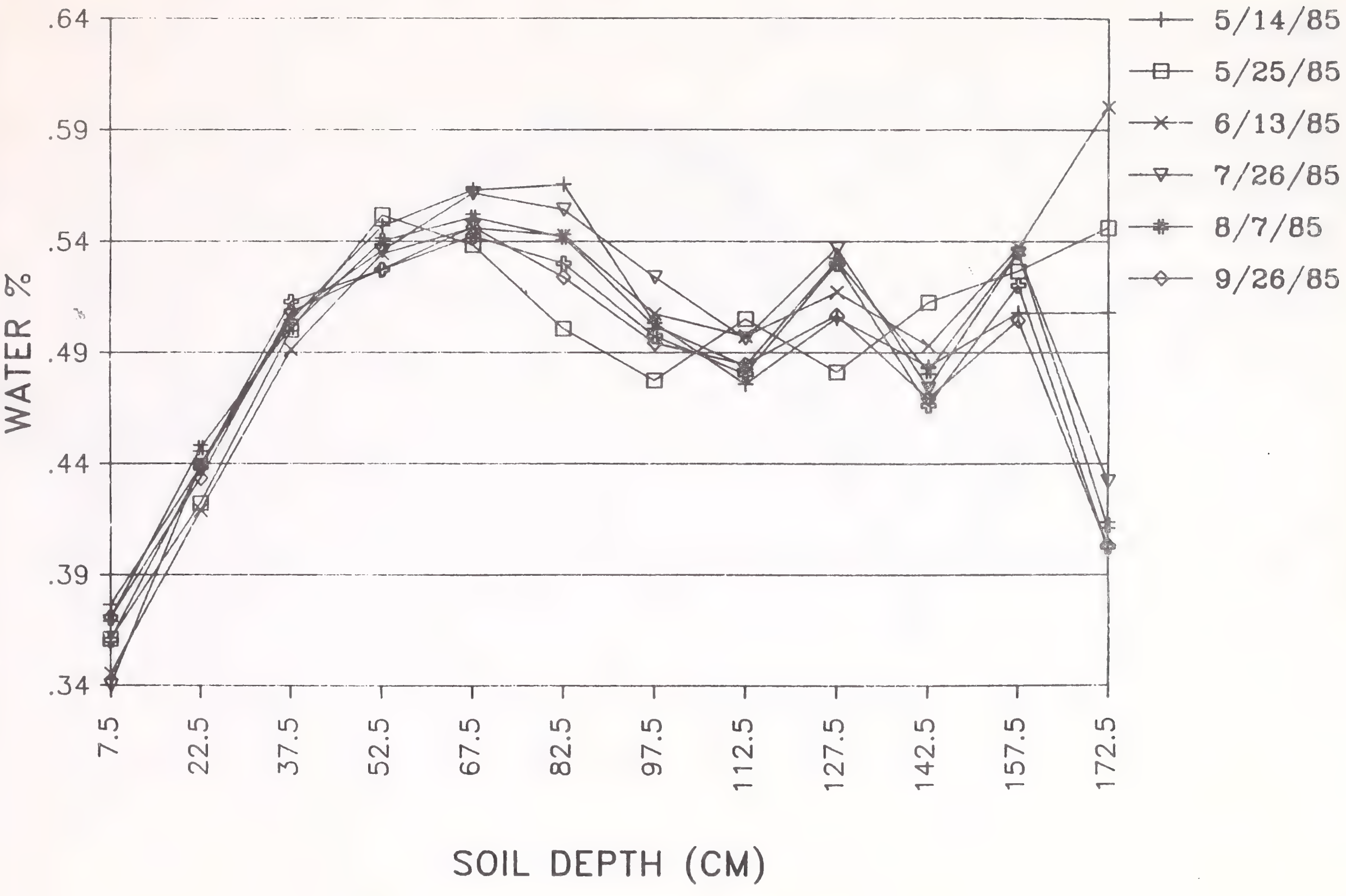


PLOT OF SOIL MOISTURE CONTENT
VS. DEPTH AT NP-19 ; SILVER BOW CREEK RI.

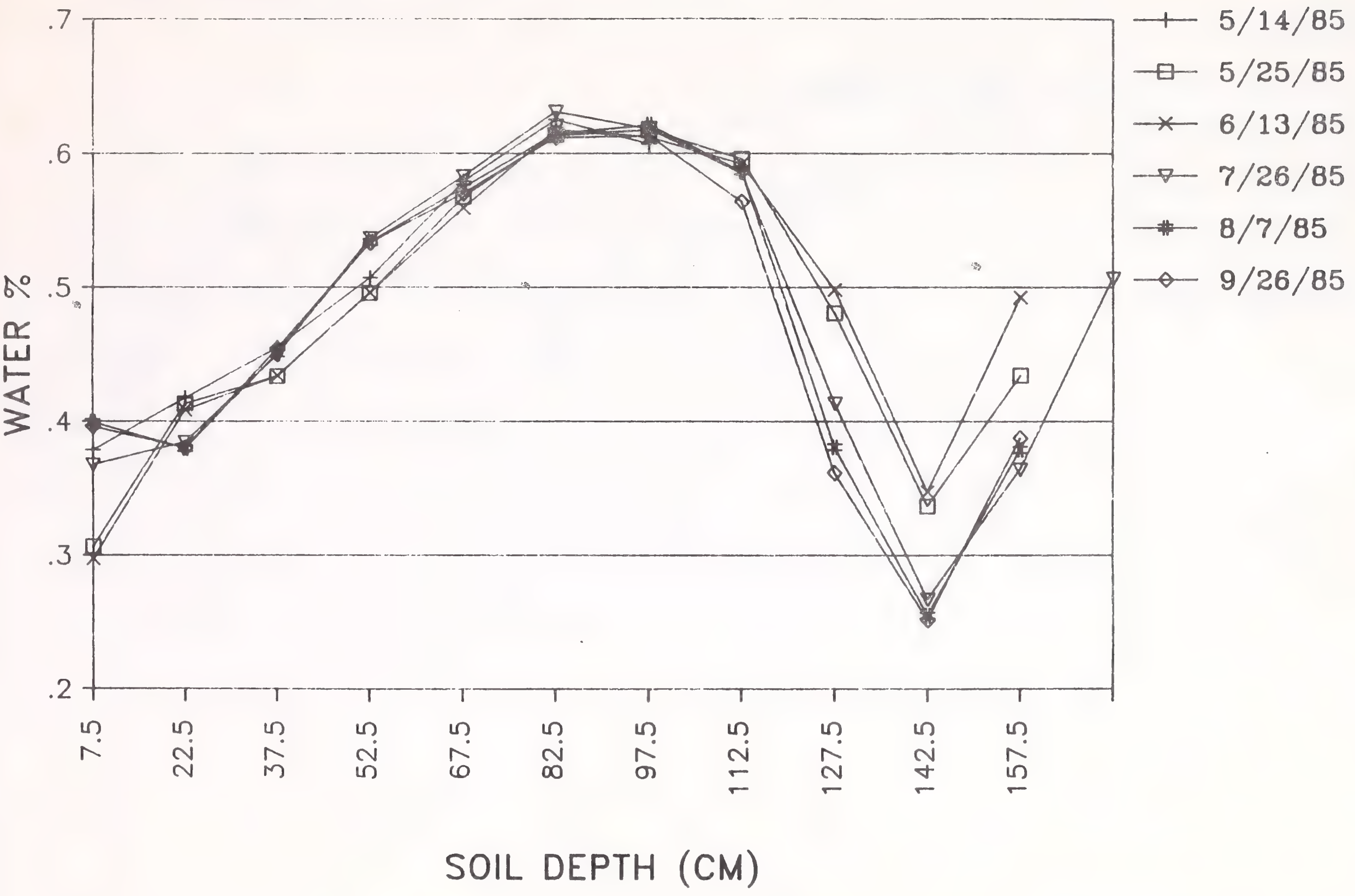


V-320

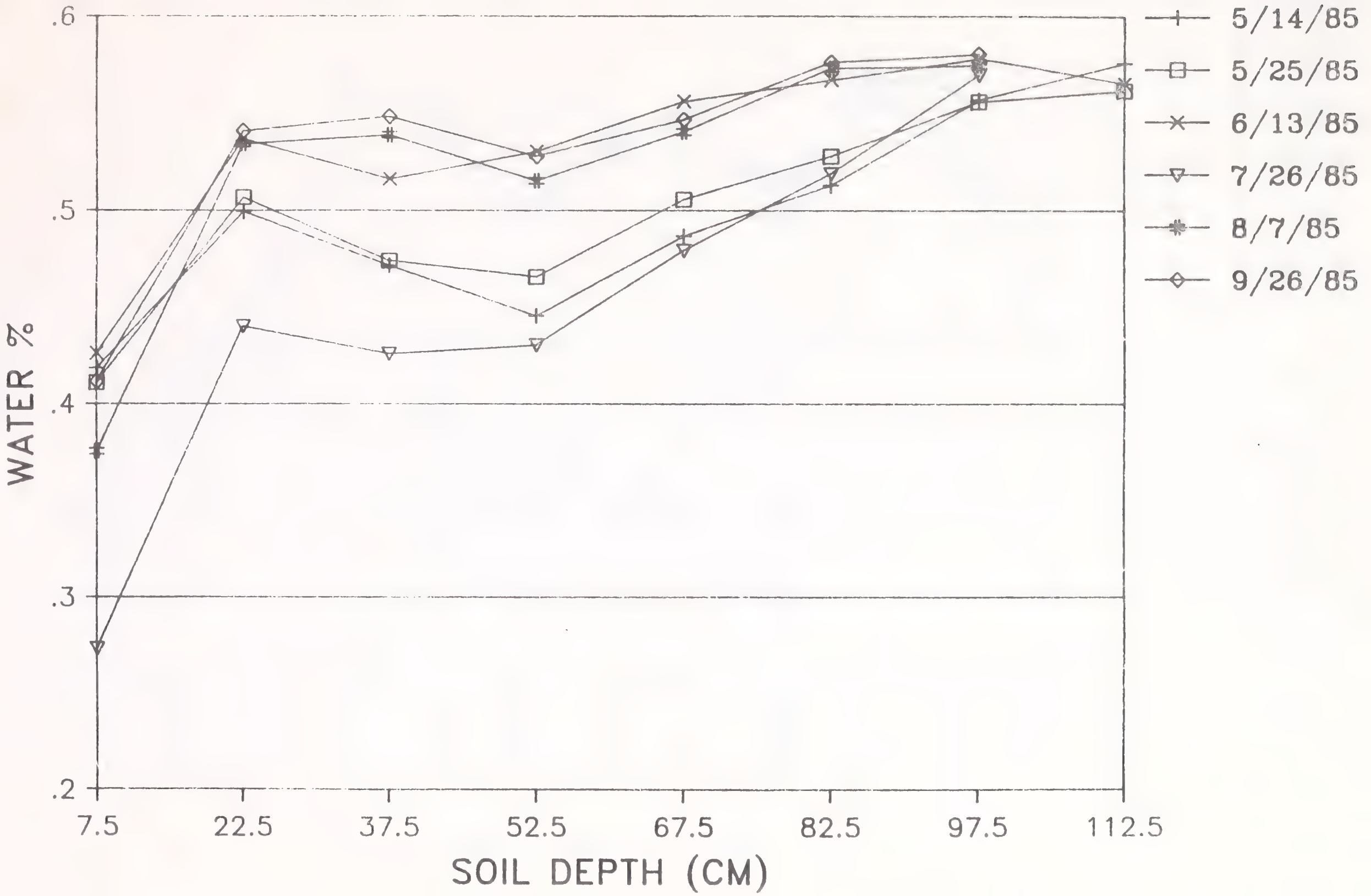
PLOT OF SOIL MOISTURE CONTENT VS. DEPTH AT NP-20 : SILVER BOW CREEK RI.



PLOT OF SOIL MOISTURE CONTENT VS. DEPTH AT NP-21 ; SILVER BOW CREEK RI.

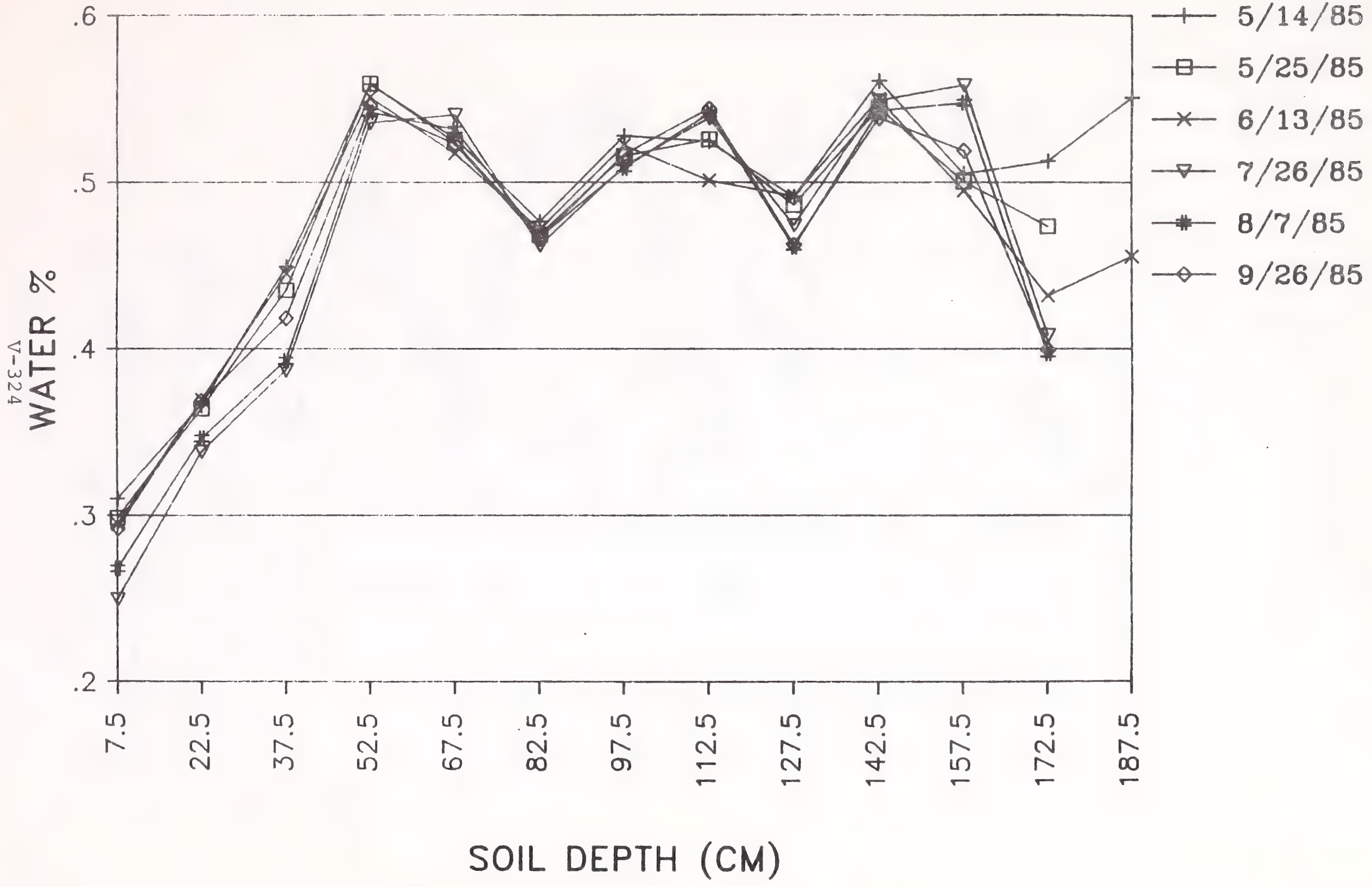


PLOT OF SOIL MOISTURE CONTENT
VS. DEPTH AT NP-21A ; SILVER BOW CREEK RI.

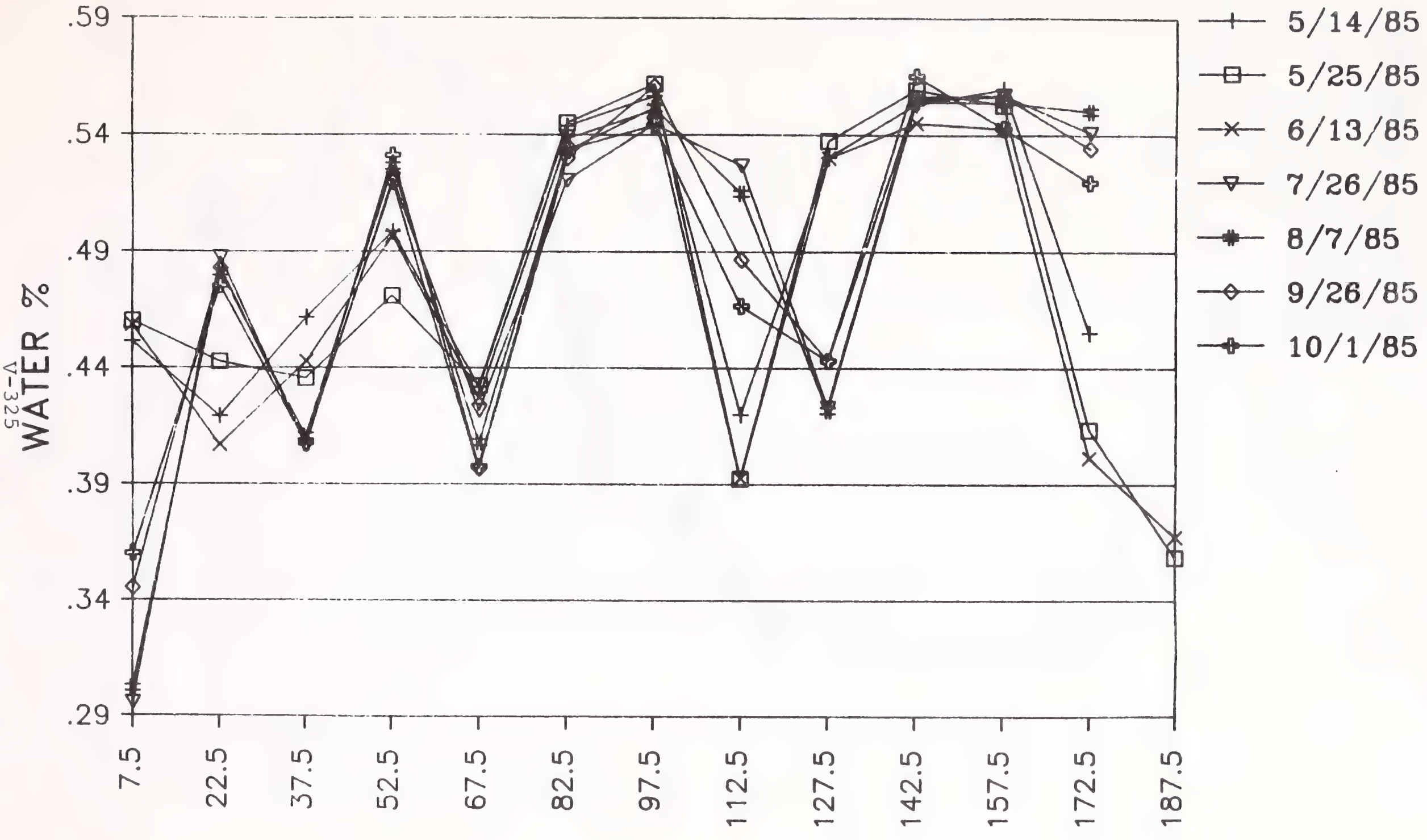
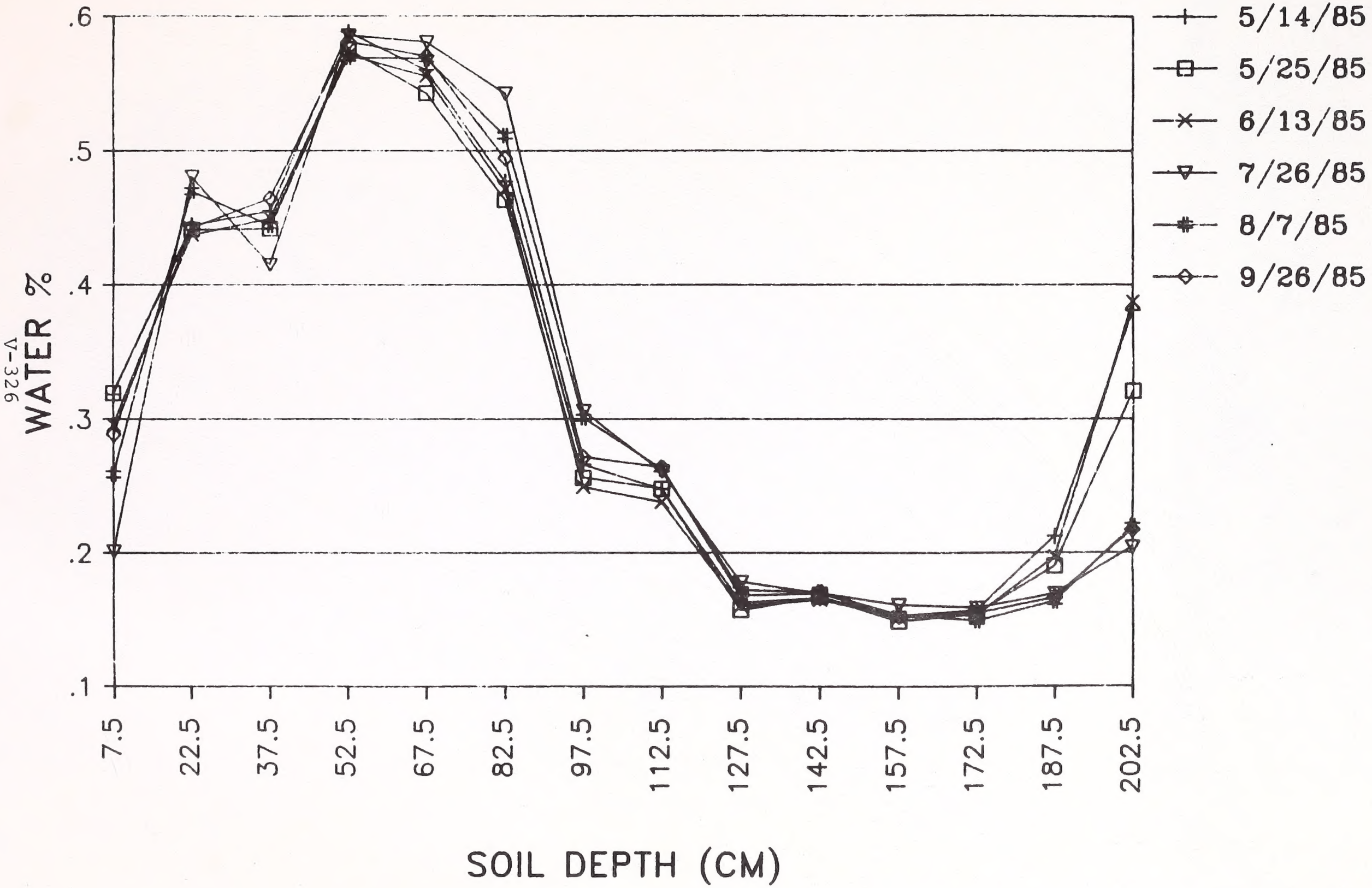


V-323

PLOT OF SOIL MOISTURE CONTENT
VS. DEPTH AT NP-22 : SILVER BOW CREEK RI.



PLOT OF SOIL MOISTURE CONTENT
VS. DEPTH AT NP-23 ; SILVER BOW CREEK RI.



PLOT OF SOIL MOISTURE CONTENT VS. DEPTH AT NP-24 ; SILVER BOW CREEK RI.